	UK NEQAS for Trace Elements	Laboratory :
	Distribution : <b>MAR2019</b> Date : 31-Mar-2019	Page 1 of 30
	Address and Comments	

Quality Manager  
 Pathology Laboratory  
 Biochemistry Department  
 Hospital  
 Town  
 Country

This is the INTERIM report.  
 - Final reports will be issued at the close of the next distribution.

Report publication date: 15/04/2019

Frimley Health NHS Foundation Trust, operating UK NEQAS for Trace Elements (7496): Accredited to ISO/IEC 17043:2010

This scheme is essentially web-based. We can alert you to information regarding the scheme via email. The e-mail address (or addresses) we are currently using to contact your laboratory is shown below. If no email address is displayed or the information shown is incorrect, please email us with an appropriate contact email address as soon as possible.

**Paper-Free**  
 We have now gone fully 'paper-free' for the accepting of routine results for our EQA Programmes.

You have until the publication of APR2019 reports to make changes to the MAR2019 report. Please contact us via email with any such amendment requests; these are made at the discretion of the Programme Organiser.

This report was authorised on 10/04/2019 by Chris Harrington



Guildford Trace Elements is a UKAS accredited proficiency testing provider No. 7496. Please see <http://www.ukas.com> for full details of the accreditation status of our services



The Trace Element scheme at Guildford is proud to offer EQA services that adhere to the Code of Practice and have the badge of quality of UK NEQAS

	Specimen	Result	Target	Bias(%)	Z-score	Uncertainty
Serum Zinc (umol/L)	2018.23	5.9	6.25	-5.6	-0.6 <span style="color: green;">◆</span>	0.13
	2018.24	8.9	9.19	-3.1	-0.4 <span style="color: green;">◆</span>	0.14
Serum Copper (umol/L)	2018.23	12.9	12.61	+2.3	0.4 <span style="color: green;">◆</span>	0.15
	2018.24	15.5	14.80	+4.7	0.8 <span style="color: green;">◆</span>	0.16
Serum Aluminium (umol/L)	2018.23	1.3	1.20	+8.7	0.9 <span style="color: green;">◆</span>	0.03
	2018.24	1.2	1.14	+5.2	0.5 <span style="color: green;">◆</span>	0.02
Serum Chromium (nmol/l)	2018.23	18.0	17.98	+0.1	0.0 <span style="color: green;">◆</span>	1.39
	2018.24	106.1	106.17	-0.1	-0.0 <span style="color: green;">◆</span>	2.34
Serum Selenium (umol/L)	2018.23	1.46	1.46	+0.2	0.0 <span style="color: green;">◆</span>	0.02
	2018.24	0.63	0.62	+1.7	0.3 <span style="color: green;">◆</span>	0.01
Serum Cobalt (nmol/l)	2018.23	51.0	50.96	+0.1	0.0 <span style="color: green;">◆</span>	1.13
	2018.24	67.4	67.11	+0.4	0.0 <span style="color: green;">◆</span>	1.16
Blood Lead (umol/L)	2018.23	0.15	0.14	+5.7	0.1 <span style="color: green;">◆</span>	0.00
	2018.24	0.64	0.61	+5.7	0.5 <span style="color: green;">◆</span>	0.01
Blood Arsenic (nmol/l)	2018.23	128.1	128.72	-0.5	-0.0 <span style="color: green;">◆</span>	3.00
	2018.24	208.5	206.17	+1.1	0.2 <span style="color: green;">◆</span>	3.79
Blood Manganese (nmol/l)	2018.23	230.5	261.6	-11.9	-0.8 <span style="color: green;">◆</span>	6.4
	2018.24	199.0	234.9	-15.3	-1.0 <span style="color: green;">◆</span>	6.6
Blood Cadmium (nmol/l)	2018.23	24.6	26.58	-7.5	-1.3 <span style="color: green;">◆</span>	0.61
	2018.24	11.0	10.92	+0.7	0.1 <span style="color: green;">◆</span>	0.25
Blood Chromium (nmol/l)	2018.23	165.4	161.03	+2.7	0.2 <span style="color: green;">◆</span>	3.51
	2018.24	23.1	24.11	-4.2	-0.1 <span style="color: green;">◆</span>	2.23
Blood Magnesium (mmol/L)	2018.23	1.50	1.43	+5.1	1.4 <span style="color: green;">◆</span>	0.04
	2018.24	1.52	1.46	+4.1	1.1 <span style="color: green;">◆</span>	0.04
Blood Thallium (nmol/l)	2018.23	22.82	23.08	-1.1	-0.1 <span style="color: green;">◆</span>	0.58
	2018.24	11.52	11.52	-0.0	-0.0 <span style="color: green;">◆</span>	0.21
Blood Cobalt (nmol/l)	2018.23	60.3	60.91	-1.0	-0.0 <span style="color: green;">◆</span>	0.78
	2018.24	18.3	19.92	-8.2	-0.1 <span style="color: green;">◆</span>	0.37
Blood Mercury (nmol/l)	2018.23	60.9	63.13	-3.5	-0.4 <span style="color: green;">◆</span>	1.24
	2018.24	21.8	22.59	-3.5	-0.2 <span style="color: green;">◆</span>	0.44
Urine Mercury (nmol/l)	2018.23	23.42	23.08	+1.5	0.0 <span style="color: green;">◆</span>	1.12
	2018.24	40.80	35.93	+13.6	0.4 <span style="color: green;">◆</span>	1.79

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	Specimen	Result	Target	Bias(%)	Z-score	Uncertainty
Urine Chromium (nmol/l)	2018.23	119.77	120.55	-0.6	-0.0	2.89
	2018.24	11.01	10.58	+4.0	0.0	1.45
Urine Lead (nmol/l)	2018.23	26.57	28.57	-7.0	-0.3	0.47
	2018.24	138.81	147.64	-6.0	-1.4	2.39
Urine Copper (umol/L)	2018.23	2.96	2.81	+5.2	0.5	0.04
	2018.24	10.86	10.42	+4.2	0.4	0.15
Urine Cobalt (nmol/l)	2018.23	67.88	70.11	-3.2	-0.2	1.10
	2018.24	23.61	24.79	-4.8	-0.1	0.52
Urine Selenium (umol/L)	2018.23	0.70	0.76	-7.6	-0.4	0.02
	2018.24	0.81	0.86	-6.0	-0.3	0.02
Urine Iron (umol/L)	2018.23	0.56	0.83	-32.2	-0.1	0.11
	2018.24	6.14	6.28	-2.2	-0.1	0.15
Urine Arsenic (nmol/l)	2018.23	264.17	288.70	-8.5	-1.4	5.49
	2018.24	131.32	149.33	-12.1	-1.4	3.22
Urine Nickel (nmol/l)	2018.23	60.1	65.22	-7.8	-0.4	3.54
	2018.24	348.9	353.43	-1.3	-0.3	8.94
Urine Zinc (umol/L)	2018.23	10.29	10.17	+1.2	0.1	0.18
	2018.24	9.54	9.28	+2.8	0.3	0.12
Urine Cadmium (nmol/l)	2018.23	12.39	12.65	-2.0	-0.2	0.29
	2018.24	14.14	14.68	-3.7	-0.3	0.26
Urine Thallium (nmol/l)	2018.23	19.41	18.15	+6.9	1.0	0.42
	2018.24	24.00	23.10	+3.9	0.7	0.35

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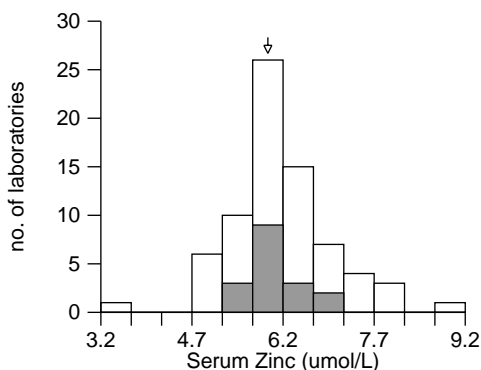
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

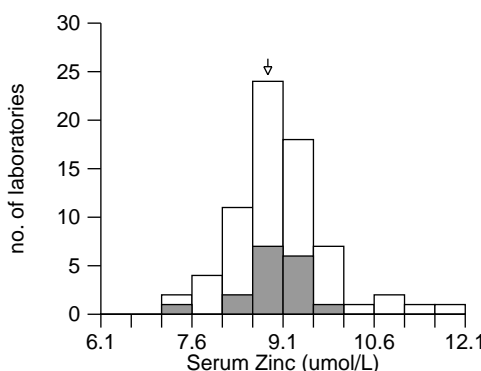
	n	Mean	SD	CV(%)
All methods [ALTM]	75	6.25	0.90	14.5
Colorimetric	2	8.13	3.06	37.6
Colorimetry	2	6.10	1.56	25.5
Colorimetry after Deproteinization	3	5.73	1.02	17.8
Electrothermal A.A.S.	1	5.99		
FAAS after Deproteinization	3	7.03	0.50	7.2
Flame A.A.S.	17	6.19	1.10	17.7
ICP-MS	14	6.18	0.35	5.7
ICP-MS (collision/reaction cell mode)	17	6.15	0.34	5.5
Z-ETAAS	3	7.26	0.19	2.6



Your result: 5.9  
Target value (ALTM): 6.25  
Uncertainty: 0.13  
Your bias (%): -5.6  
Your 'Z' score: -0.6 ◆  
ALTM: 6.25  
Median: 6.15  
Your method mean: 6.15  
Absolute range to: 3.30 to 10.30

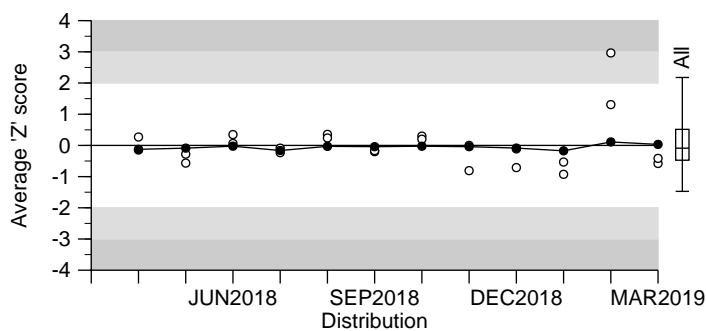
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	76	9.19	0.94	10.2
Colorimetric	2	10.28	2.86	27.8
Colorimetry	2	8.65	1.20	13.9
Colorimetry after Deproteinization	3	9.67	0.59	6.1
Electrothermal A.A.S.	1	8.80		
FAAS after Deproteinization	3	8.53	2.96	34.7
Flame A.A.S.	18	8.85	0.93	10.5
ICP-MS	14	8.99	0.44	4.9
ICP-MS (collision/reaction cell mode)	17	9.02	0.54	6.0
Z-ETAAS	3	11.09	1.09	9.9

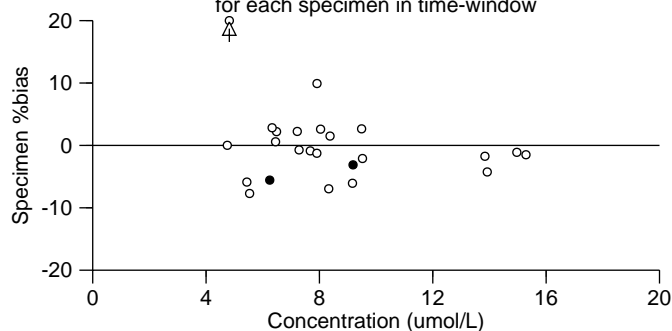


Your result: 8.9  
Target value (ALTM): 9.19  
Uncertainty: 0.14  
Your bias (%): -3.1  
Your 'Z' score: -0.4 ◆  
ALTM: 9.19  
Median: 9.02  
Your method mean: 9.02  
Absolute range to: 4.70 to 13.57

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window



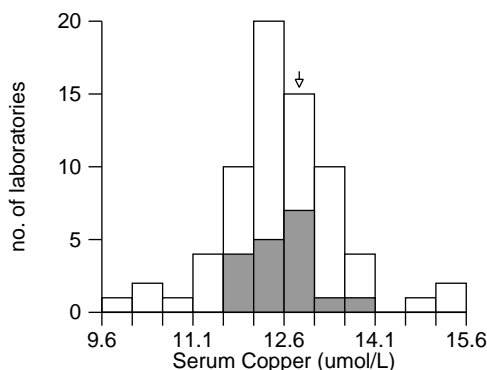
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

All methods  
 ICP-MS  
 ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

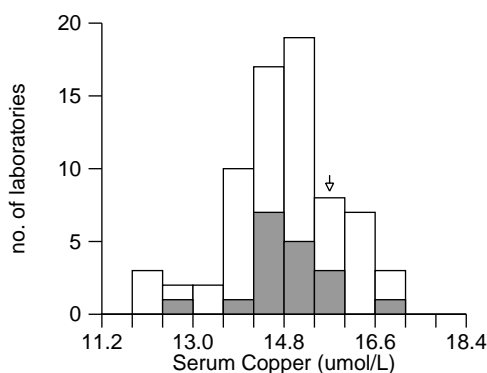
	n	Mean	SD	CV(%)
All methods [ALTM]	70	12.61	1.00	7.9
Colorimetric	3	14.36	1.81	12.6
Electrothermal A.A.S.	2	11.90	1.41	11.8
FAAS after Deproteinization	3	12.65	0.45	3.6
Flame A.A.S.	15	12.11	1.21	10.0
ICP-MS	13	12.81	0.57	4.4
ICP-MS (collision/reaction cell mode)	18	12.62	0.49	3.9
Z-ETAAS	4	12.47	0.87	7.0



Your result: 12.9  
 Target value (ALTM): 12.61  
 Uncertainty: 0.15  
 Your bias (%): +2.3  
 Your 'Z' score: +0.4 ◆  
 ALTM: 12.61  
 Median: 12.60  
 Your method mean: 12.62  
 Absolute range to: 10.05 to 15.40

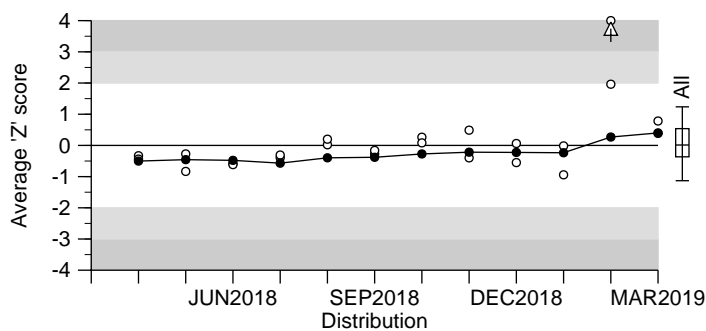
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	71	14.80	1.11	7.5
Colorimetric	3	15.48	1.42	9.2
Electrothermal A.A.S.	2	13.20	0.98	7.4
FAAS after Deproteinization	4	15.14	0.62	4.1
Flame A.A.S.	15	14.32	1.30	9.1
ICP-MS	13	14.98	0.71	4.7
ICP-MS (collision/reaction cell mode)	18	14.88	0.95	6.4
Z-ETAAS	4	14.66	1.02	7.0

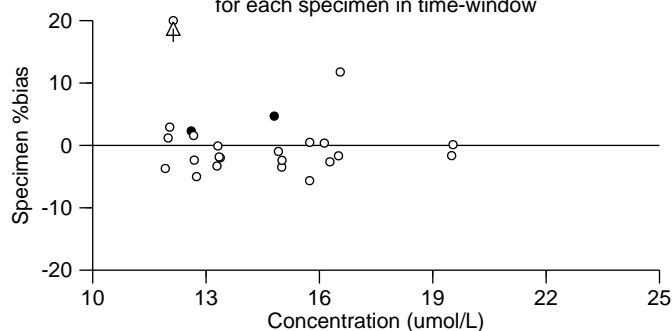


Your result: 15.5  
 Target value (ALTM): 14.80  
 Uncertainty: 0.16  
 Your bias (%): +4.7  
 Your 'Z' score: +0.8 ◆  
 ALTM: 14.80  
 Median: 14.98  
 Your method mean: 14.88  
 Absolute range to: 11.93 to 17.20

Your Average 'Z' score = +0.4



Specimen %bias for each specimen in time-window



R36-ARBIS

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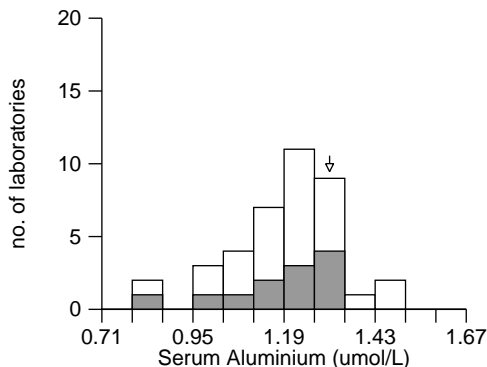
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

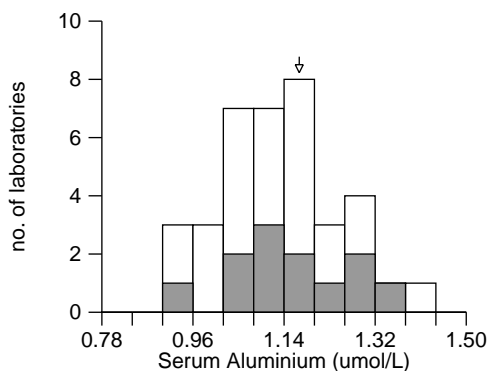
	n	Mean	SD	CV(%)
All methods [ALTM]	39	1.20	0.14	11.9
Electrothermal A.A.S	2	1.15	0.24	20.9
ICP-MS	11	1.20	0.11	9.4
ICP-MS (collision/reaction cell mode)	12	1.17	0.15	12.5
Z-ETAAS	8	1.24	0.21	16.8



Your result	1.3
Target value (ALTM)	1.20
Uncertainty	0.03
Your bias (%)	+8.7
Your 'Z' score	+0.9
ALTM	1.20
Median	1.20
Your method mean	1.17
Absolute range to	0.83 to 1.48

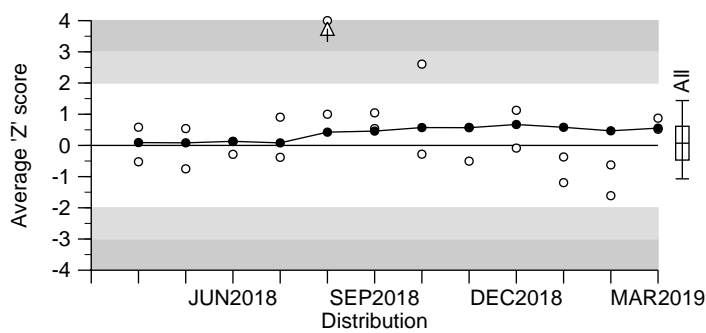
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	38	1.14	0.12	10.3
Electrothermal A.A.S	2	1.11	0.23	21.1
ICP-MS	11	1.12	0.09	8.1
ICP-MS (collision/reaction cell mode)	12	1.17	0.12	10.3
Z-ETAAS	8	1.18	0.13	11.0

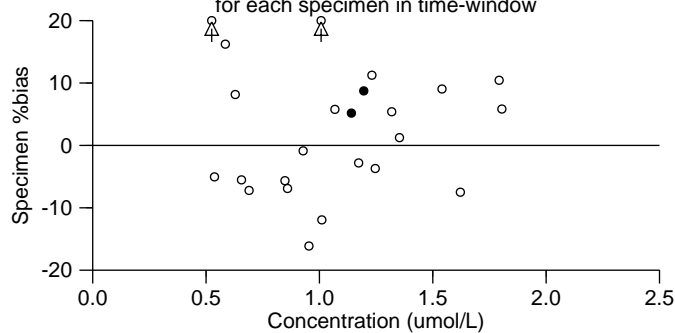


Your result	1.2
Target value (ALTM)	1.14
Uncertainty	0.02
Your bias (%)	+5.2
Your 'Z' score	+0.5
ALTM	1.14
Median	1.14
Your method mean	1.17
Absolute range to	0.94 to 2.38

Your Average 'Z' score = +0.6



Specimen %bias for each specimen in time-window



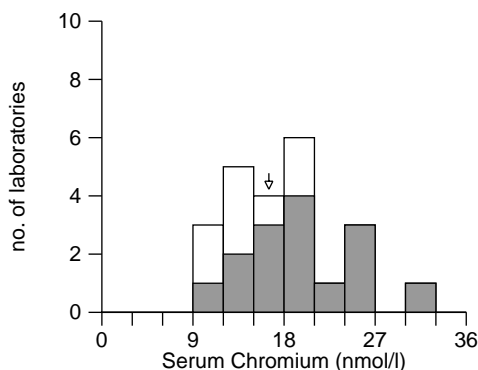
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

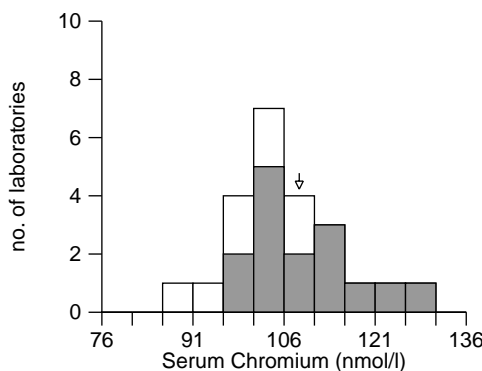
	n	Mean	SD	CV(%)
All methods [ALTM]	23	17.98	5.31	29.6
HR ICP-MS	1	15.00		
ICP-MS	1	19.00		
ICP-MS (Collision/reaction cell mode)	15	19.57	5.60	28.6
Z-ETAAS (Zeeman graphite furnace)	2	15.10	0.40	2.7



Your result 18.0  
Target value (ALTM) 17.98  
Uncertainty 1.39  
Your bias (%) +0.1  
Your 'Z' score 0.0 ◆  
ALTM 17.98  
Median 18.00  
Your method mean 19.57  
Absolute range to 10.46 to 30.60

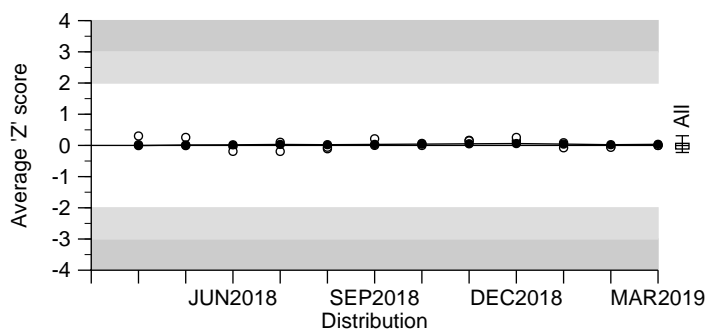
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	23	106.17	8.99	8.5
HR ICP-MS	1	102.00		
ICP-MS	1	107.80		
ICP-MS (Collision/reaction cell mode)	15	109.54	8.43	7.7
Z-ETAAS (Zeeman graphite furnace)	2	101.64	7.76	7.6

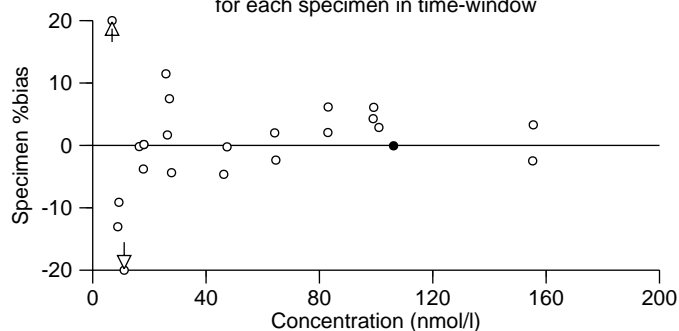


Your result 106.1  
Target value (ALTM) 106.17  
Uncertainty 2.34  
Your bias (%) -0.1  
Your 'Z' score -0.0 ◆  
ALTM 106.17  
Median 104.50  
Your method mean 109.54  
Absolute range to 91.00 to 127.00

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window



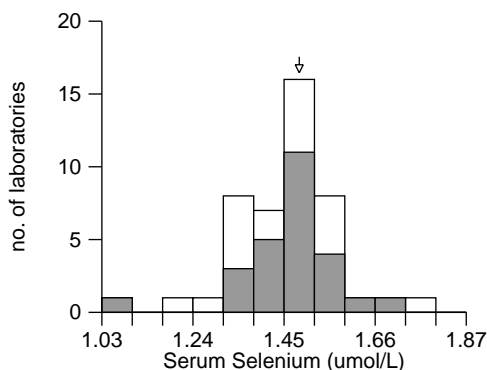
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

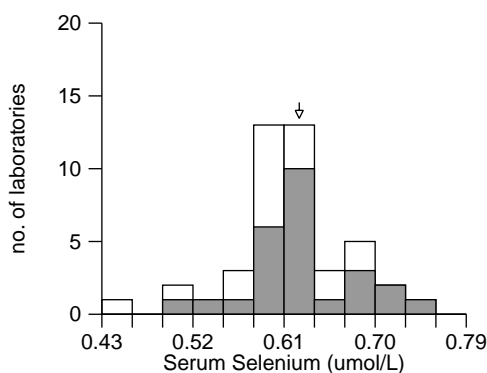
	n	Mean	SD	CV(%)
All methods [ALTM]	45	1.46	0.12	8.2
Electrothermal A.A.S.	1	1.32		
HG-AAS	1	1.43		
ICP-MS	6	1.50	0.17	11.1
ICP-MS (collision/reaction cell mode)	26	1.48	0.09	6.1
Z-ETAAS	4	1.39	0.11	8.0



Your result	1.46
Target value (ALTM)	1.46
Uncertainty	0.02
Your bias (%)	+0.2
Your 'Z' score	0.0
ALTM	1.46
Median	1.47
Your method mean	1.48
Absolute range to	1.10 to 1.80

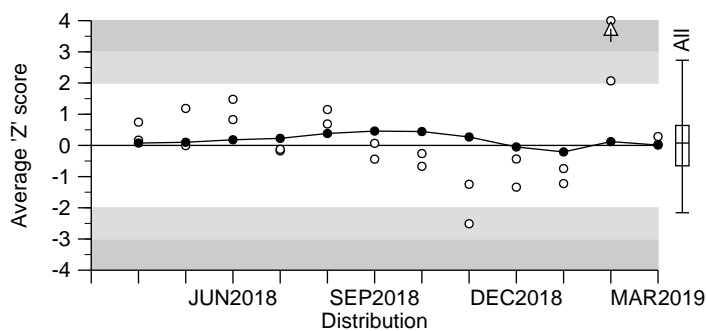
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	45	0.62	0.06	9.0
Electrothermal A.A.S.	1	0.45		
HG-AAS	1	0.61		
ICP-MS	6	0.68	0.16	23.6
ICP-MS (collision/reaction cell mode)	26	0.63	0.05	8.3
Z-ETAAS	4	0.58	0.02	3.8

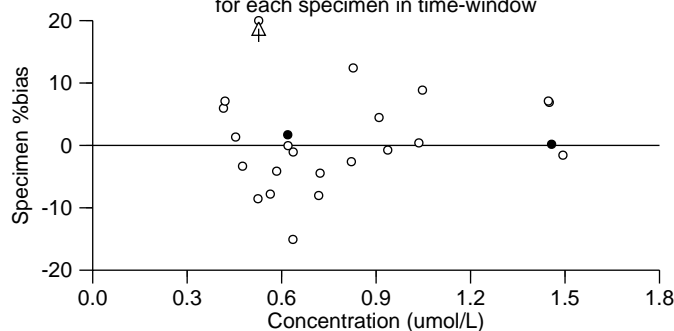


Your result	0.63
Target value (ALTM)	0.62
Uncertainty	0.01
Your bias (%)	+1.7
Your 'Z' score	+0.3
ALTM	0.62
Median	0.62
Your method mean	0.63
Absolute range to	0.45 to 1.00

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window





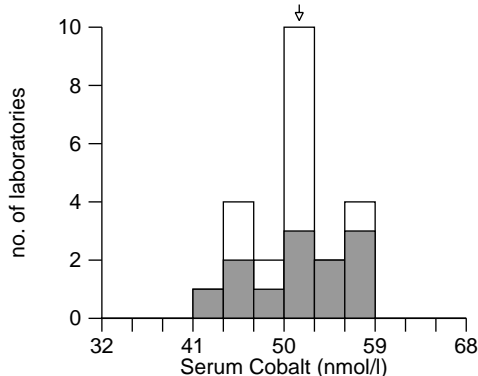
Spec. Pool Pool description / Treatments / Additions

2018.23 S1015 Spiked Sample  
2018.24 S1018 Spiked Sample

□ All methods  
■ ICP-MS Collision/reaction cell mode

**Specimen : 2018.23**

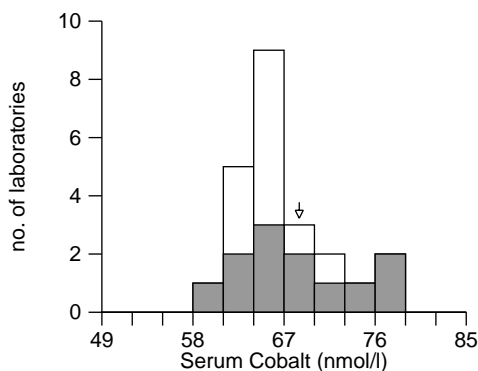
	n	Mean	SD	CV(%)
All methods [ALTM]	23	50.96	4.35	8.5
HR ICP-MS	1	53.00		
ICP-MS	3	52.74	3.71	7.0
ICP-MS Collision/reaction cell mode	12	51.60	5.06	9.8



Your result 51.0  
Target value (ALTM) 50.96  
Uncertainty 1.13  
Your bias (%) +0.1  
Your 'Z' score 0.0 ◆  
ALTM 50.96  
Median 50.91  
Your method mean 51.60  
Absolute range to 42.60 to 58.60

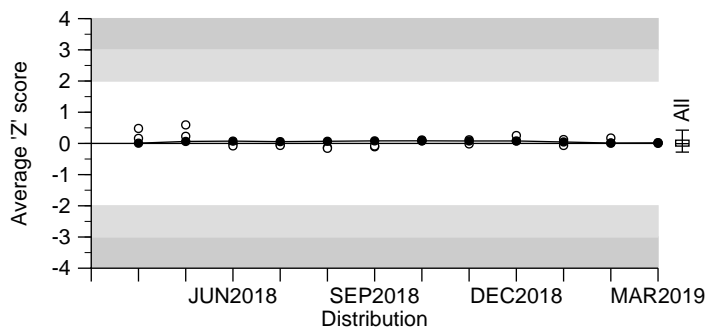
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	23	67.11	4.44	6.6
HR ICP-MS	1	70.00		
ICP-MS	3	66.76	4.55	6.8
ICP-MS Collision/reaction cell mode	12	67.98	5.44	8.0

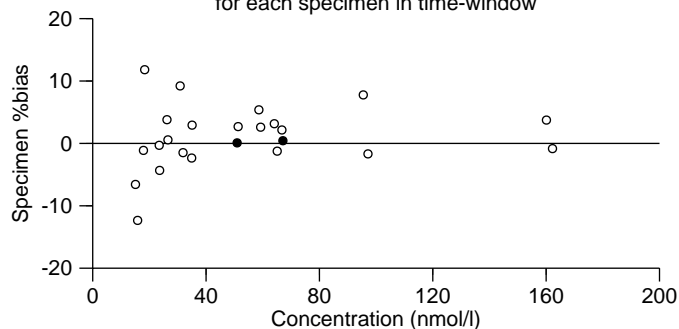


Your result 67.4  
Target value (ALTM) 67.11  
Uncertainty 1.16  
Your bias (%) +0.4  
Your 'Z' score 0.0 ◆  
ALTM 67.11  
Median 66.18  
Your method mean 67.98  
Absolute range to 60.50 to 76.40

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window



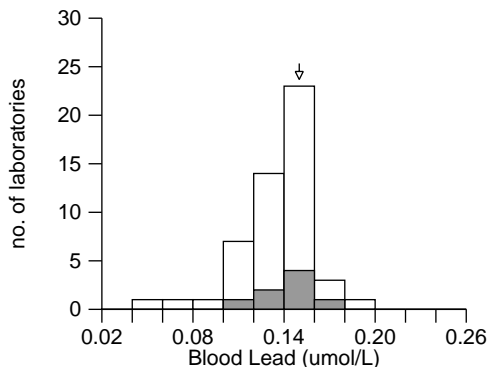
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

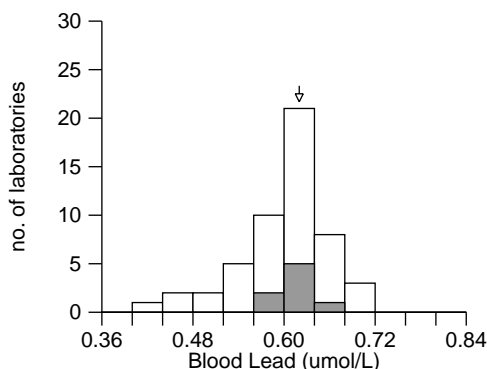
	n	Mean	SD	CV(%)
All methods [ALTM]	52	0.14	0.02	14.1
ETAAS	3	0.14	0.02	14.3
Furnace Graphite - AAS	1	0.14		
ICP-MS	17	0.14	0.01	10.1
ICP-MS (collision/reaction cell mode)	9	0.13	0.05	35.1
Z-ETAAS	13	0.14	0.04	29.3



Your result 0.15  
Target value (ALTM) 0.14  
Uncertainty 0.00  
Your bias (%) +5.7  
Your 'Z' score +0.1 ◆  
ALTM 0.14  
Median 0.15  
Your method mean 0.13  
Absolute range to 0.02 to 0.19

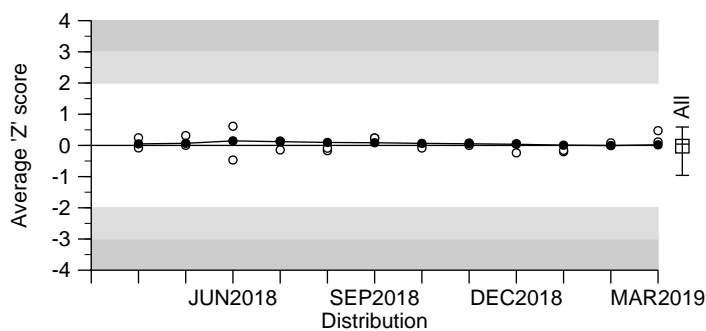
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	53	0.61	0.06	9.8
ETAAS	3	0.63	0.06	8.7
Furnace Graphite - AAS	1	0.53		
ICP-MS	18	0.61	0.04	7.2
ICP-MS (collision/reaction cell mode)	9	0.57	0.18	32.3
Z-ETAAS	13	0.60	0.07	12.2

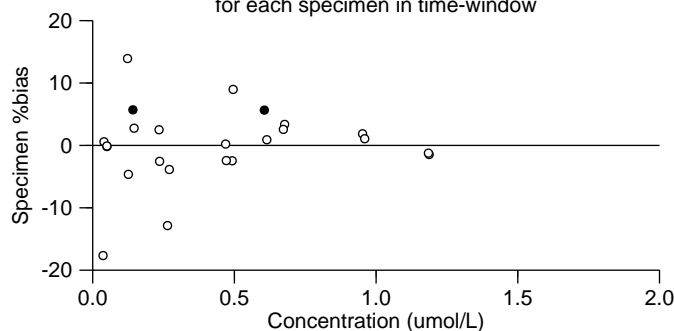


Your result 0.64  
Target value (ALTM) 0.61  
Uncertainty 0.01  
Your bias (%) +5.7  
Your 'Z' score +0.5 ◆  
ALTM 0.61  
Median 0.62  
Your method mean 0.57  
Absolute range to 0.08 to 0.72

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window



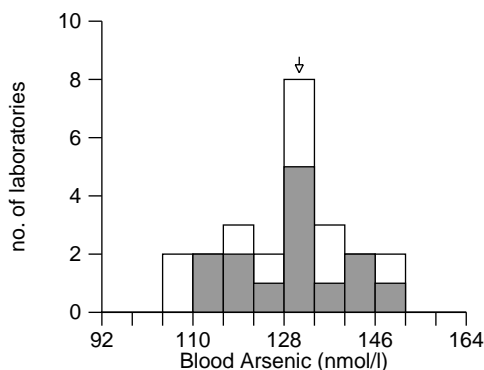
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

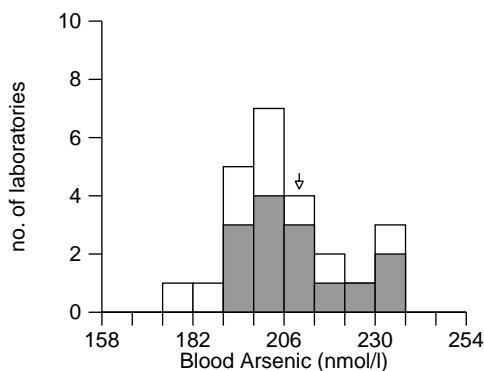
	n	Mean	SD	CV(%)
All methods [ALTM]	24	128.72	11.74	9.1
HG-AAS	1	133.48		
ICP-MS	3	118.33	8.02	6.8
ICP-MS (Collision/reaction cell mode)	4	129.25	10.99	8.5



Your result	128.1
Target value (ALTM)	128.72
Uncertainty	3.00
Your bias (%)	-0.5
Your 'Z' score	-0.0
ALTM	128.72
Median	128.85
Your method mean	129.25
Absolute range to	106.83 to 151.38

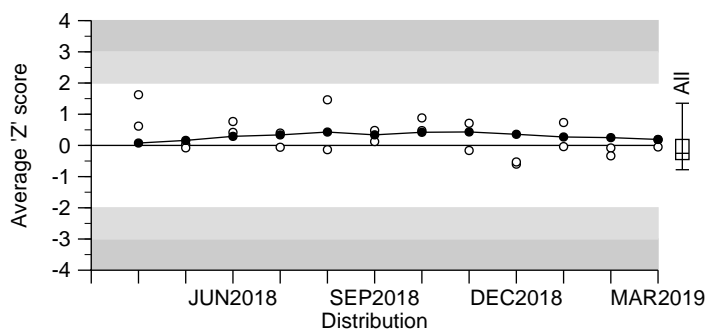
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	24	206.17	14.85	7.2
HG-AAS	1	186.87		
ICP-MS	3	199.67	6.51	3.3
ICP-MS (Collision/reaction cell mode)	4	208.83	14.03	6.7

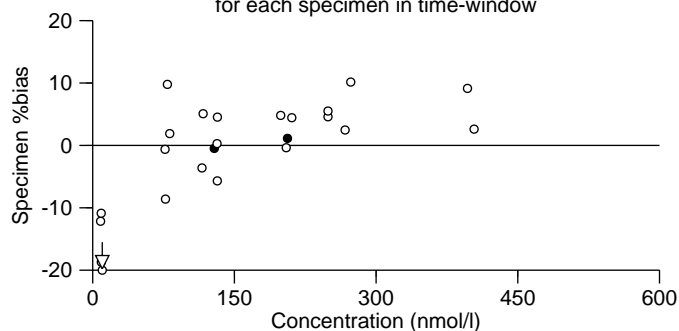


Your result	208.5
Target value (ALTM)	206.17
Uncertainty	3.79
Your bias (%)	+1.1
Your 'Z' score	+0.2
ALTM	206.17
Median	203.85
Your method mean	208.83
Absolute range to	178.18 to 235.00

Your Average 'Z' score = +0.2



Specimen %bias for each specimen in time-window

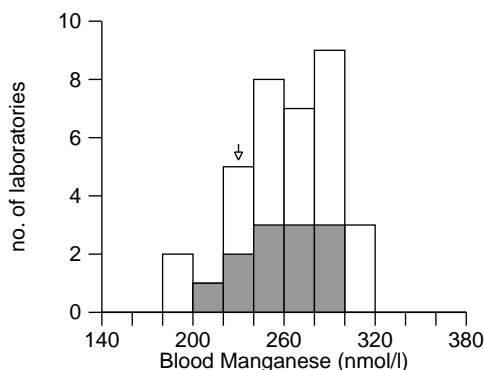


Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

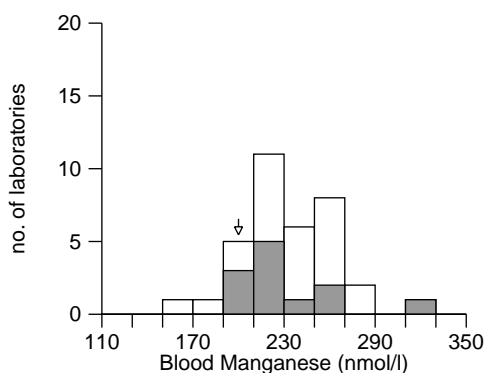
- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

Specimen : 2018.23	n	Mean	SD	CV(%)
All methods [ALTM]	35	261.6	30.4	11.6
Electrothermal A.A.S.	1	197.8		
Furnace Graphite - AAS	1	187.9		
ICP-MS	10	270.8	31.5	11.6
ICP-MS (collision/reaction cell mode)	12	256.6	24.5	9.5
Z-ETAAS	4	284.8	12.8	4.5



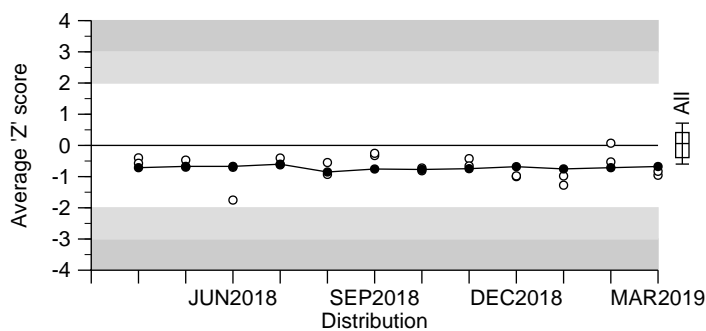
Your result 230.5  
Target value (ALTM) 261.6  
Uncertainty 6.4  
Your bias (%) -11.9  
Your 'Z' score -0.8 ◆  
ALTM 261.6  
Median 262.0  
Your method mean 256.6  
Absolute range to 187.9 to 311.2

Specimen : 2018.24	n	Mean	SD	CV(%)
All methods [ALTM]	35	234.9	31.2	13.3
Electrothermal A.A.S.	1	157.7		
Furnace Graphite - AAS	1	179.9		
ICP-MS	10	241.7	27.5	11.4
ICP-MS (collision/reaction cell mode)	12	234.4	31.4	13.4
Z-ETAAS	4	257.2	15.6	6.1

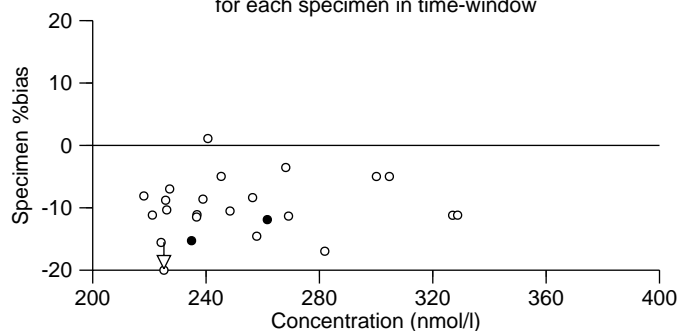


Your result 199.0  
Target value (ALTM) 234.9  
Uncertainty 6.6  
Your bias (%) -15.3  
Your 'Z' score -1.0 ◆  
ALTM 234.9  
Median 230.0  
Your method mean 234.4  
Absolute range to 157.7 to 315.8

Your Average 'Z' score = -0.7



Specimen %bias for each specimen in time-window



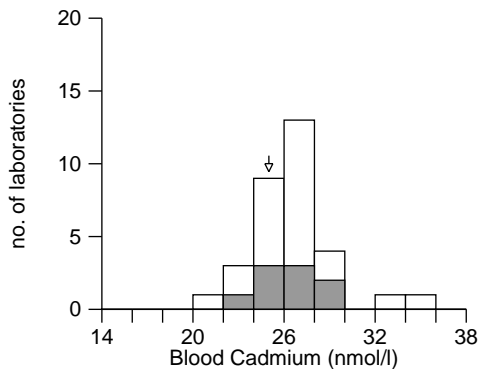
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

- All methods
- ▒ ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

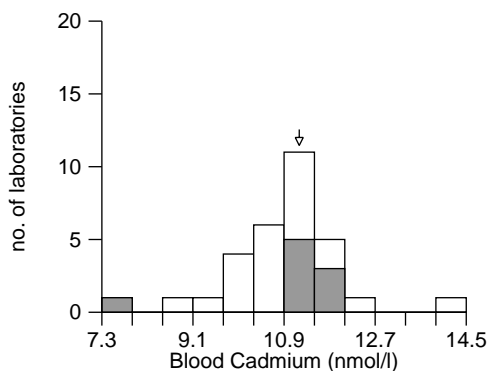
	n	Mean	SD	CV(%)
All methods [ALTM]	32	26.58	2.75	10.3
ICP-MS	12	27.14	2.17	8.0
ICP-MS (collision/reaction cell mode)	9	26.47	2.11	8.0
Z-ETAAS	4	27.73	5.98	21.6



Your result	24.6
Target value (ALTM)	26.58
Uncertainty	0.61
Your bias (%)	-7.5
Your 'Z' score	-1.3
ALTM	26.58
Median	26.46
Your method mean	26.47
Absolute range to	20.37 to 34.70

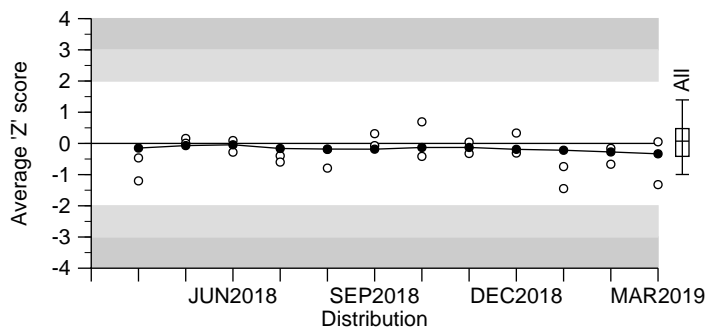
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	32	10.92	1.11	10.2
ICP-MS	12	11.03	0.50	4.5
ICP-MS (collision/reaction cell mode)	9	11.02	1.34	12.1
Z-ETAAS	4	11.74	2.62	22.3

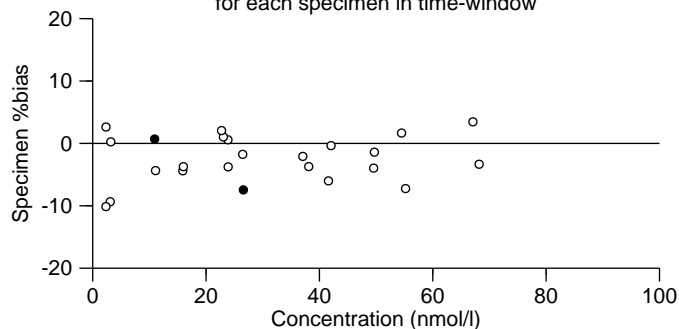


Your result	11.0
Target value (ALTM)	10.92
Uncertainty	0.25
Your bias (%)	+0.7
Your 'Z' score	+0.1
ALTM	10.92
Median	11.00
Your method mean	11.02
Absolute range to	7.65 to 15.12

Your Average 'Z' score = -0.3



Specimen %bias for each specimen in time-window



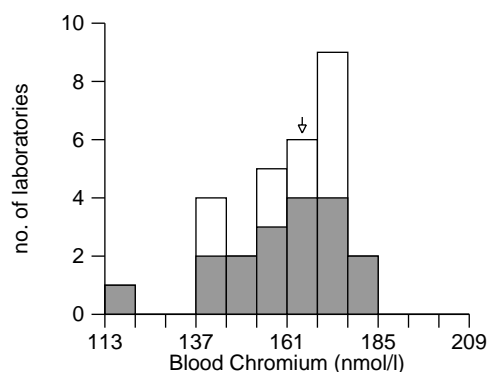
Spec.	Pool	Pool description / Treatments / Additions
2018.23	B1034	Spiked Sample
2018.24	B1032	Spiked Sample

All methods  
 ICP-MS (Collision/reaction cell mode)

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**Specimen : 2018.23**

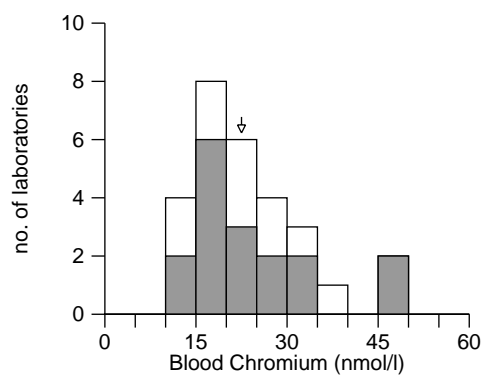
	n	Mean	SD	CV(%)
All methods [ALTM]	29	161.03	15.14	9.4
HR ICP-MS	1	174.00		
ICP-MS	2	145.60	11.03	7.6
ICP-MS (Collision/reaction cell mode)	18	160.53	16.49	10.3
Z-ETAAS	1	158.30		



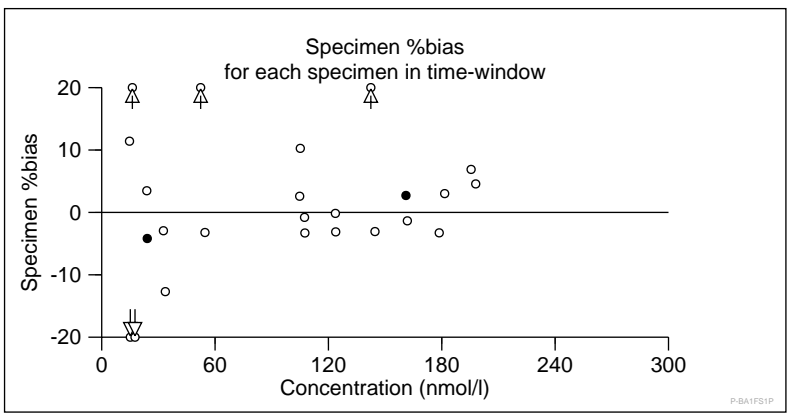
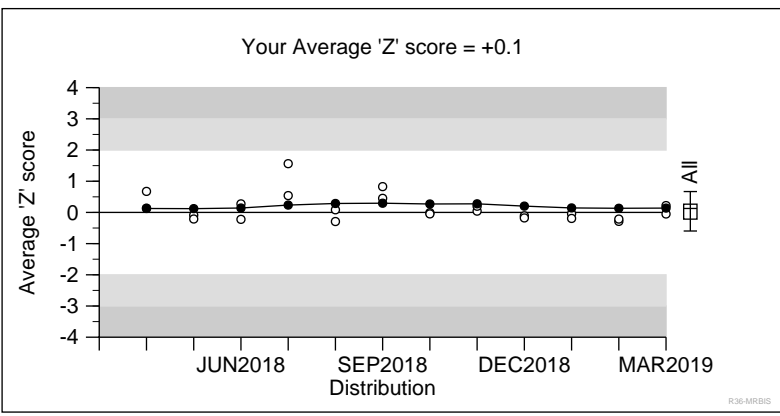
Your result	165.4
Target value (ALTM)	161.03
Uncertainty	3.51
Your bias (%)	+2.7
Your 'Z' score	+0.2 <span style="color: green;">◆</span>
ALTM	161.03
Median	166.00
Your method mean	160.53
Absolute range to	117.69 to 180.00

**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	28	24.11	9.44	39.2
HR ICP-MS	1	19.00		
ICP-MS	2	19.65	11.10	56.5
ICP-MS (Collision/reaction cell mode)	17	24.37	10.48	43.0
Z-ETAAS	1	26.35		



Your result	23.1
Target value (ALTM)	24.11
Uncertainty	2.23
Your bias (%)	-4.2
Your 'Z' score	-0.1 <span style="color: green;">◆</span>
ALTM	24.11
Median	22.05
Your method mean	24.37
Absolute range to	11.20 to 46.82



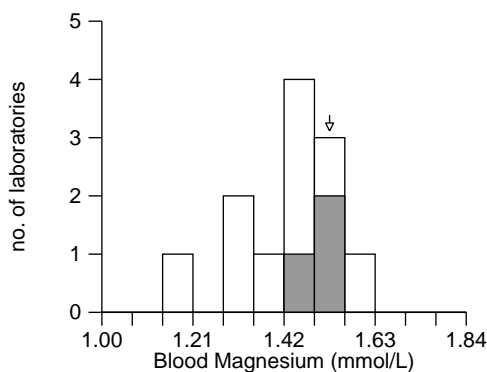
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

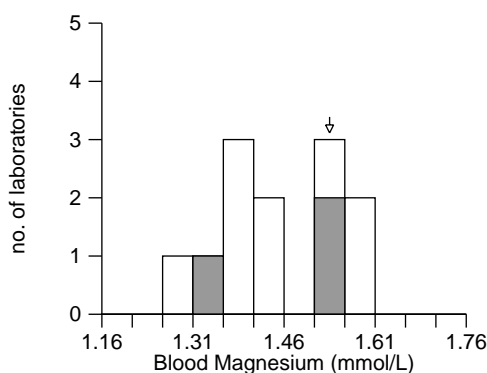
	n	Mean	SD	CV(%)
All methods [ALTM]	12	1.43	0.12	8.3
FAAS after Deproteinization	1	1.48		
Flame AAS	2	1.44	0.13	8.8
ICP-MS (Collision/reaction cell mode)	3	1.48	0.03	2.3



Your result	1.50
Target value (ALTM)	1.43
Uncertainty	0.04
Your bias (%)	+5.1
Your 'Z' score	+1.4
ALTM	1.43
Median	1.45
Your method mean	1.48
Absolute range to	1.16 to 1.61

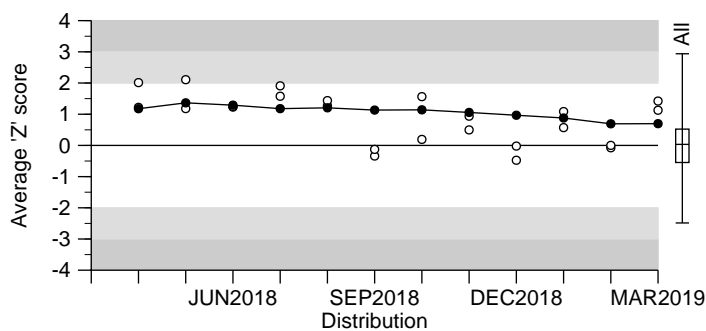
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	12	1.46	0.10	6.8
FAAS after Deproteinization	1	1.45		
Flame AAS	2	1.48	0.09	6.2
ICP-MS (Collision/reaction cell mode)	3	1.47	0.10	7.1

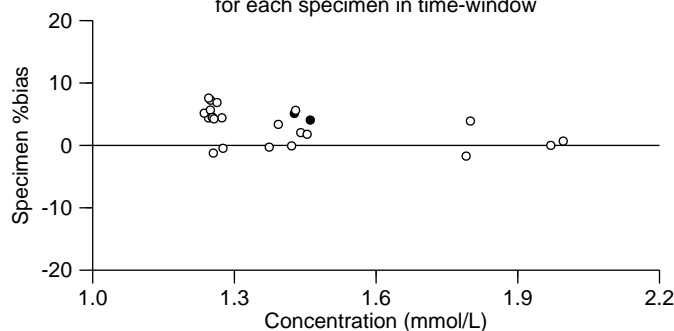


Your result	1.52
Target value (ALTM)	1.46
Uncertainty	0.04
Your bias (%)	+4.1
Your 'Z' score	+1.1
ALTM	1.46
Median	1.45
Your method mean	1.47
Absolute range to	1.28 to 1.60

Your Average 'Z' score = +0.7



Specimen %bias for each specimen in time-window



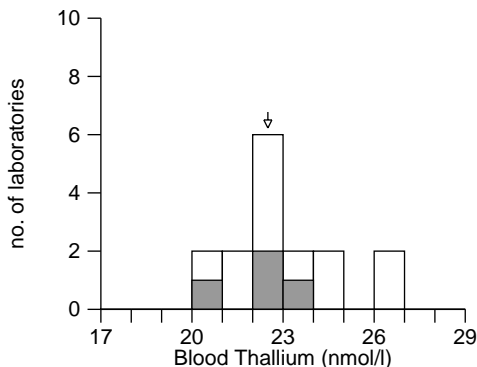
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

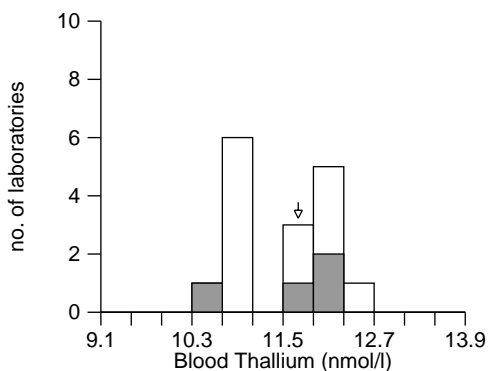
	n	Mean	SD	CV(%)
All methods [ALTM]	16	23.08	1.86	8.0
ICP-MS	7	23.55	2.45	10.4
ICP-MS (Collision/reaction cell mode)	4	22.47	1.46	6.5



Your result	22.82
Target value (ALTM)	23.08
Uncertainty	0.58
Your bias (%)	-1.1
Your 'Z' score	-0.1 <span style="color: green;">◆</span>
ALTM	23.08
Median	22.83
Your method mean	22.47
Absolute range to	20.20 to 27.00

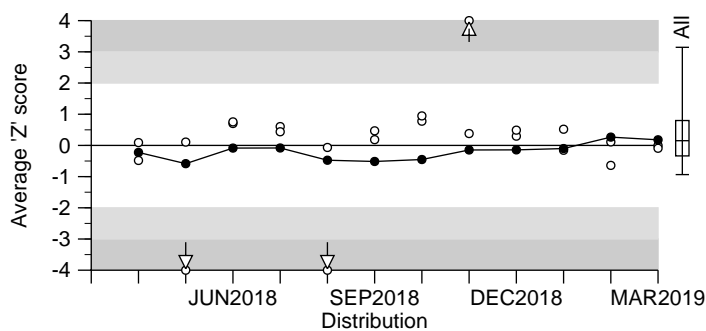
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	16	11.52	0.66	5.7
ICP-MS	7	11.56	0.66	5.7
ICP-MS (Collision/reaction cell mode)	4	11.60	0.74	6.4

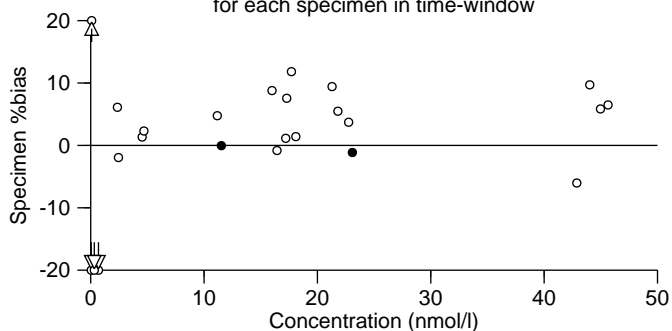


Your result	11.52
Target value (ALTM)	11.52
Uncertainty	0.21
Your bias (%)	-0.0
Your 'Z' score	-0.0 <span style="color: green;">◆</span>
ALTM	11.52
Median	11.56
Your method mean	11.60
Absolute range to	10.60 to 12.60

Your Average 'Z' score = +0.2



Specimen %bias for each specimen in time-window





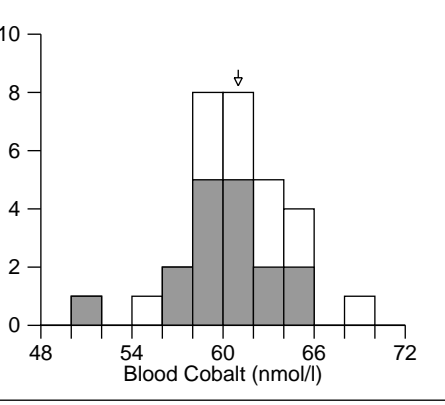
Spec.	Pool	Pool description / Treatments / Additions
2018.23	B1034	Spiked Sample
2018.24	B1032	Spiked Sample

All methods  
 ICP-MS (Collision/reaction cell mode)

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**Specimen : 2018.23**

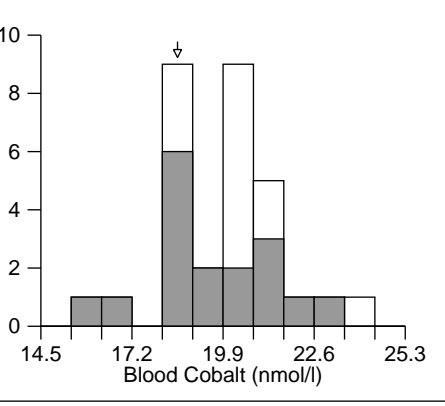
	n	Mean	SD	CV(%)
All methods [ALTM]	30	60.91	3.44	5.6
HR ICP-MS	1	65.00		
ICP-MS	5	63.83	3.73	5.8
ICP-MS (Collision/reaction cell mode)	7	60.05	3.14	5.2



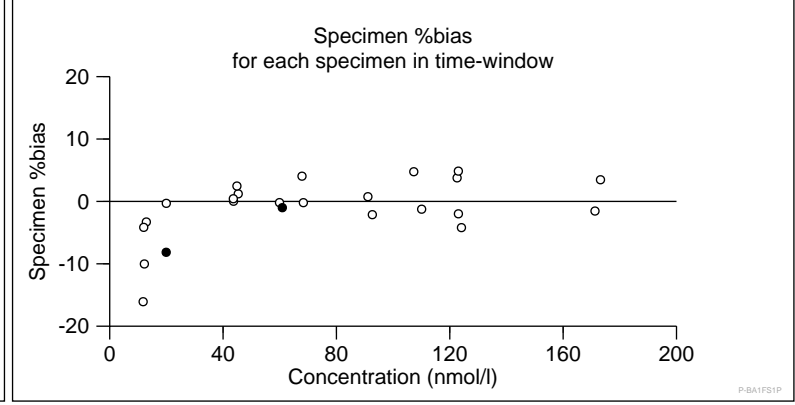
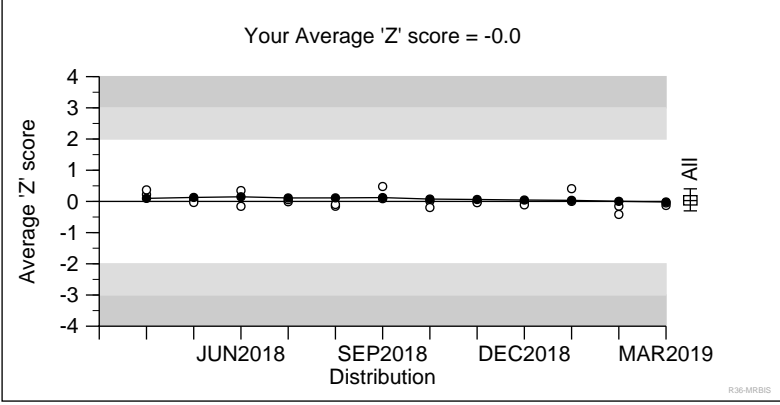
Your result	60.3
Target value (ALTM)	60.91
Uncertainty	0.78
Your bias (%)	-1.0
Your 'Z' score	-0.0 <span style="color: green;">◆</span>
ALTM	60.91
Median	60.64
Your method mean	60.05
Absolute range to	52.00 to 69.57

**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	30	19.92	1.63	8.2
HR ICP-MS	1	21.00		
ICP-MS	5	21.16	1.50	7.1
ICP-MS (Collision/reaction cell mode)	7	19.59	1.79	9.2



Your result	18.3
Target value (ALTM)	19.92
Uncertainty	0.37
Your bias (%)	-8.2
Your 'Z' score	-0.1 <span style="color: green;">◆</span>
ALTM	19.92
Median	20.05
Your method mean	19.59
Absolute range to	16.05 to 23.76



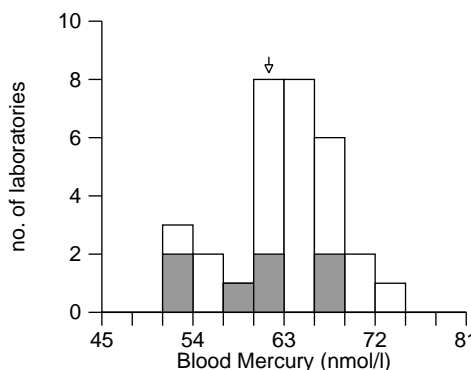
Spec. Pool Pool description / Treatments / Additions

2018.23 B1034 Spiked Sample  
2018.24 B1032 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

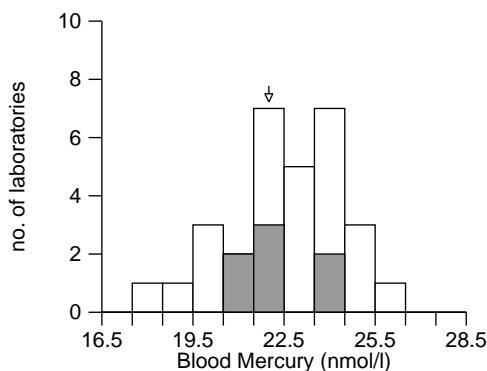
	n	Mean	SD	CV(%)
All methods [ALTM]	31	63.13	5.53	8.8
CV-AAS	3	70.01	4.73	6.8
ICP-MS	15	61.98	4.23	6.8
ICP-MS (Collision/reaction cell mode)	7	60.00	6.58	11.0



Your result 60.9  
Target value (ALTM) 63.13  
Uncertainty 1.24  
Your bias (%) -3.5  
Your 'Z' score -0.4 ◆  
ALTM 63.13  
Median 63.61  
Your method mean 60.00  
Absolute range to 51.20 to 74.85

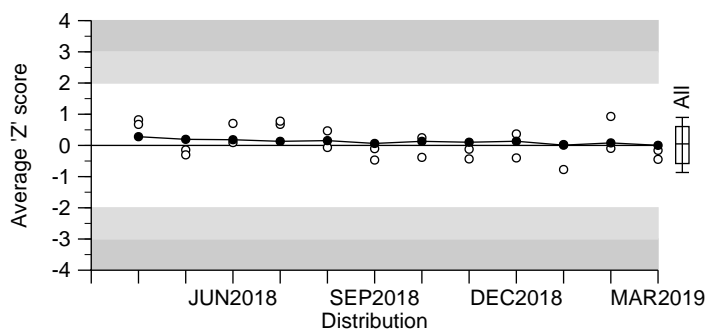
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	31	22.59	1.93	8.6
CV-AAS	3	27.27	4.48	16.4
ICP-MS	15	21.90	1.99	9.1
ICP-MS (Collision/reaction cell mode)	7	22.23	1.27	5.7

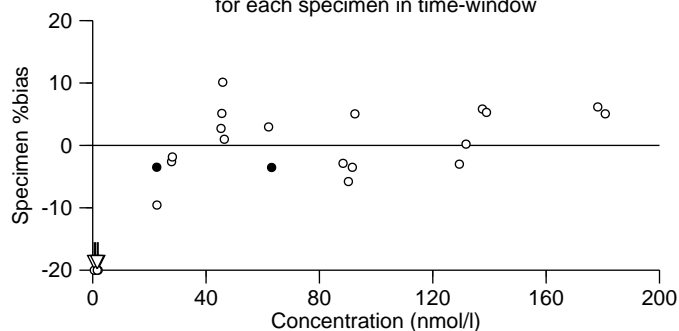


Your result 21.8  
Target value (ALTM) 22.59  
Uncertainty 0.44  
Your bias (%) -3.5  
Your 'Z' score -0.2 ◆  
ALTM 22.59  
Median 23.00  
Your method mean 22.23  
Absolute range to 18.20 to 32.44

Your Average 'Z' score = 0.0



Specimen %bias for each specimen in time-window



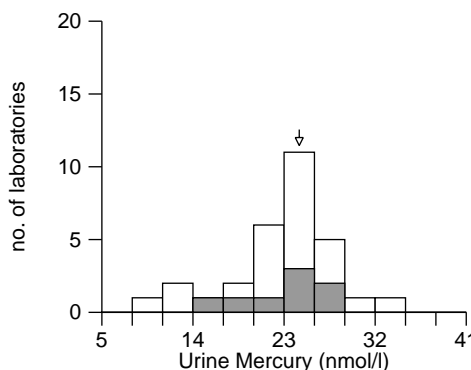
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

All methods  
 ICP-MS  
 ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

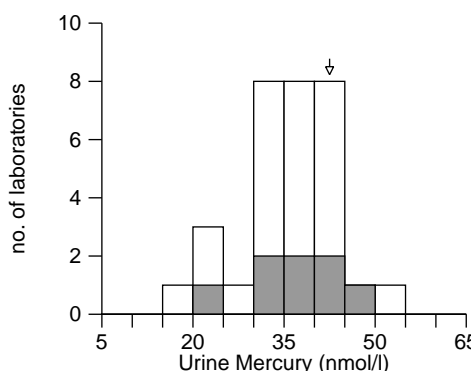
	n	Mean	SD	CV(%)
All methods [ALTM]	31	23.08	4.91	21.3
CV-AAS	3	26.30	4.83	18.4
CV-AFS	1	19.50		
ICP-MS	13	23.73	4.49	18.9
ICP-MS (collision/reaction cell mode)	8	23.26	4.08	17.6



Your result: 23.42  
 Target value (ALTM): 23.08  
 Uncertainty: 1.12  
 Your bias (%): +1.5  
 Your 'Z' score: 0.0 ◆  
 ALTM: 23.08  
 Median: 23.55  
 Your method mean: 23.26  
 Absolute range to: 4.49 to 34.00

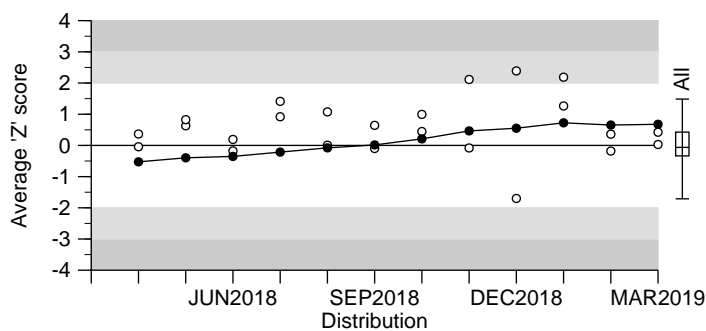
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	31	35.93	7.96	22.1
CV-AAS	3	36.48	4.56	12.5
CV-AFS	1	31.00		
ICP-MS	13	36.73	7.71	21.0
ICP-MS (collision/reaction cell mode)	8	37.18	7.77	20.9

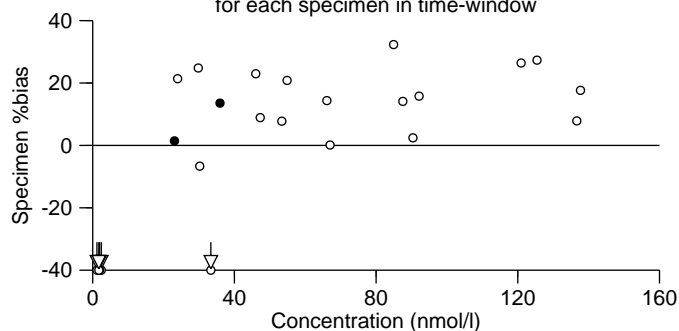


Your result: 40.80  
 Target value (ALTM): 35.93  
 Uncertainty: 1.79  
 Your bias (%): +13.6  
 Your 'Z' score: +0.4 ◆  
 ALTM: 35.93  
 Median: 37.39  
 Your method mean: 37.18  
 Absolute range to: 17.00 to 53.00

Your Average 'Z' score = +0.7



Specimen %bias for each specimen in time-window



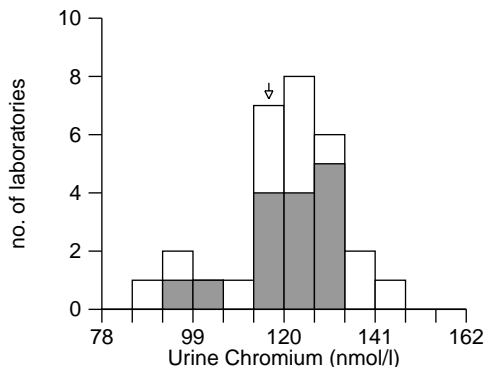
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

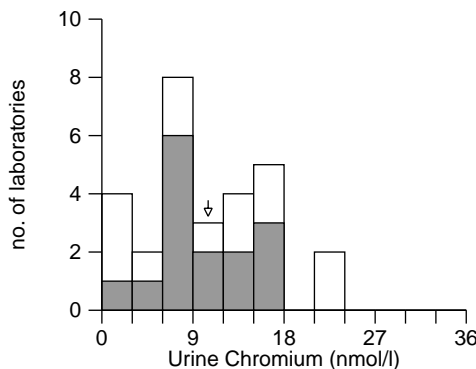
	n	Mean	SD	CV(%)
All methods [ALTM]	29	120.55	12.47	10.3
ICP-MS	3	133.97	11.63	8.7
ICP-MS (Collision/reaction cell mode)	15	120.81	9.82	8.1
Z-ETAAS	2	116.56	10.33	8.9



Your result 119.77  
Target value (ALTM) 120.55  
Uncertainty 2.89  
Your bias (%) -0.6  
Your 'Z' score -0.0 ◆  
ALTM 120.55  
Median 120.92  
Your method mean 120.81  
Absolute range to 87.29 to 142.50

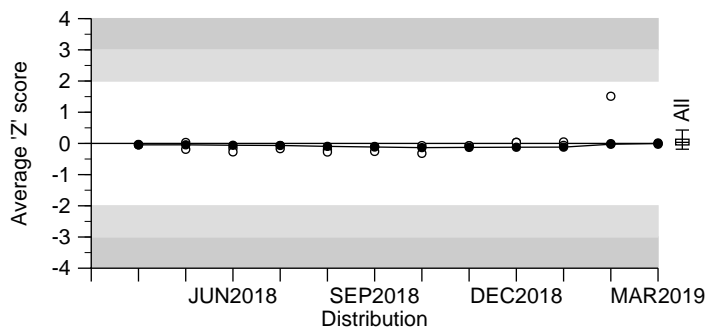
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	28	10.58	6.13	57.9
ICP-MS	3	15.46	7.01	45.4
ICP-MS (Collision/reaction cell mode)	15	10.26	4.50	43.8
Z-ETAAS	2	5.38	7.62	141.4

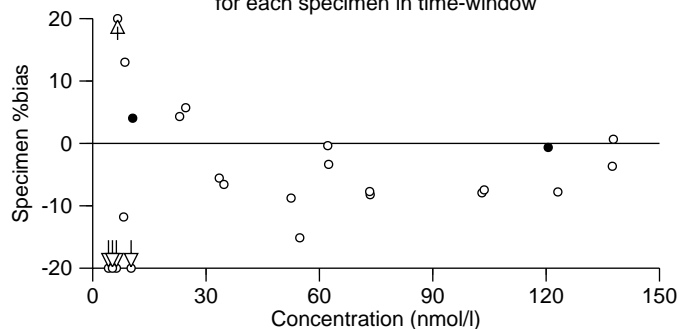


Your result 11.01  
Target value (ALTM) 10.58  
Uncertainty 1.45  
Your bias (%) +4.0  
Your 'Z' score 0.0 ◆  
ALTM 10.58  
Median 9.66  
Your method mean 10.26  
Absolute range to 0.00 to 22.69

Your Average 'Z' score = -0.0



Specimen %bias for each specimen in time-window



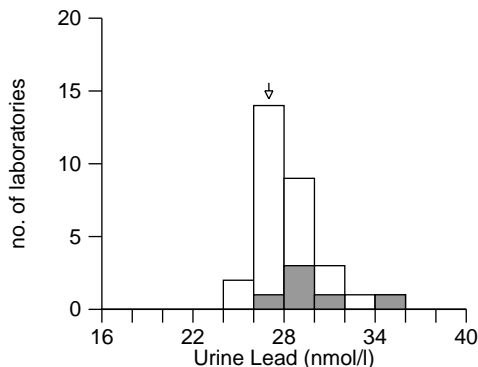
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

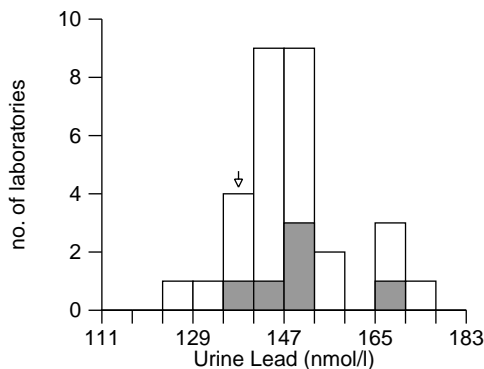
	n	Mean	SD	CV(%)
All methods [ALTM]	30	28.57	2.07	7.3
ICP-MS	13	27.38	1.34	4.9
ICP-MS (Collision/reaction cell mode)	6	30.06	2.92	9.7
Z-ETAAS Zeeman graphite furnace	3	29.95	2.35	7.8



Your result 26.57  
Target value (ALTM) 28.57  
Uncertainty 0.47  
Your bias (%) -7.0  
Your 'Z' score -0.3 ◆  
ALTM 28.57  
Median 28.00  
Your method mean 30.06  
Absolute range to 24.80 34.70

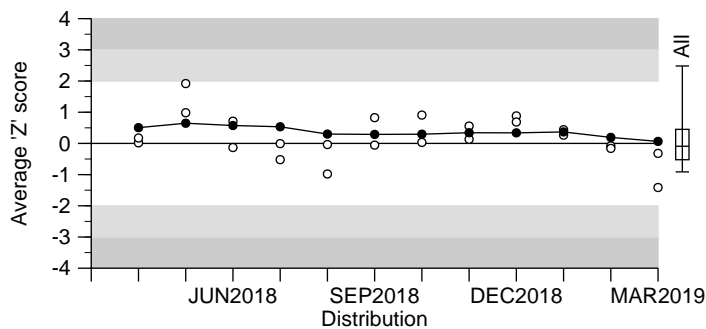
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	30	147.64	10.49	7.1
ICP-MS	13	143.25	10.43	7.3
ICP-MS (Collision/reaction cell mode)	6	150.53	8.70	5.8
Z-ETAAS Zeeman graphite furnace	3	147.17	5.99	4.1

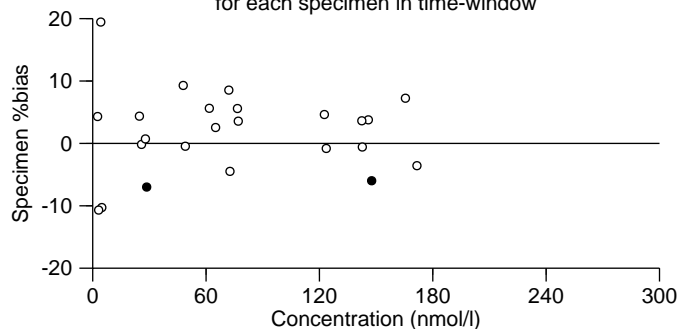


Your result 138.81  
Target value (ALTM) 147.64  
Uncertainty 2.39  
Your bias (%) -6.0  
Your 'Z' score -1.4 ◆  
ALTM 147.64  
Median 147.01  
Your method mean 150.53  
Absolute range to 128.10 172.00

Your Average 'Z' score = +0.1



Specimen %bias for each specimen in time-window

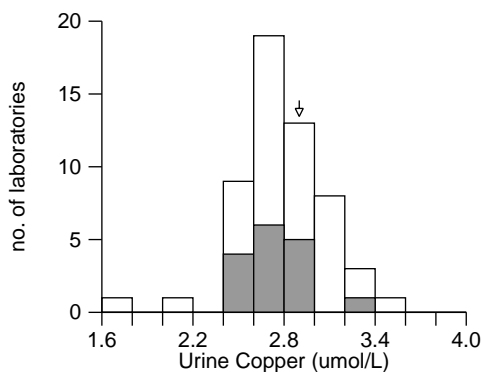


Spec.	Pool	Pool description / Treatments / Additions
2018.23	U1042	Spiked Sample
2018.24	U1046	Spiked Sample

- All methods
- ICP-MS
- ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

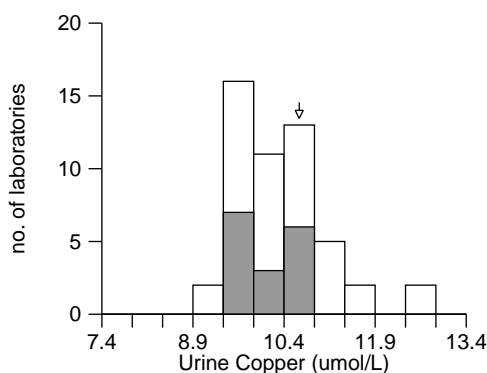
	n	Mean	SD	CV(%)
All methods [ALTM]	56	2.81	0.26	9.3
Flame AAS	6	3.18	0.58	18.4
ICP-MS	17	2.76	0.29	10.4
ICP-MS (collision/reaction cell mode)	16	2.77	0.19	6.7
Z-ETAAS	3	2.92	0.22	7.6



Your result	2.96
Target value (ALTM)	2.81
Uncertainty	0.04
Your bias (%)	+5.2
Your 'Z' score	+0.5 <span style="color: green;">◆</span>
ALTM	2.81
Median	2.79
Your method mean	2.77
Absolute range to	1.74 to 4.23

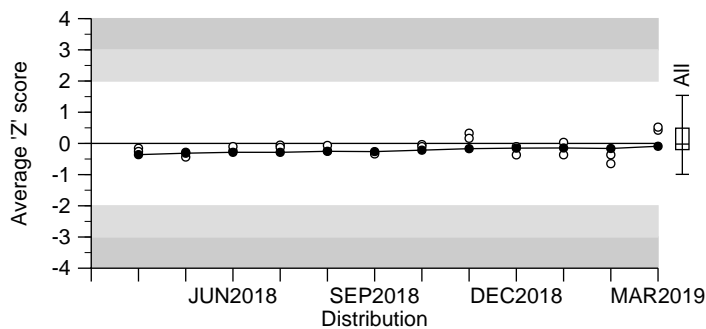
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	54	10.42	0.89	8.5
Flame AAS	5	11.24	1.15	10.2
ICP-MS	17	10.17	0.60	5.9
ICP-MS (collision/reaction cell mode)	16	10.12	0.48	4.8
Z-ETAAS	3	10.88	0.60	5.5

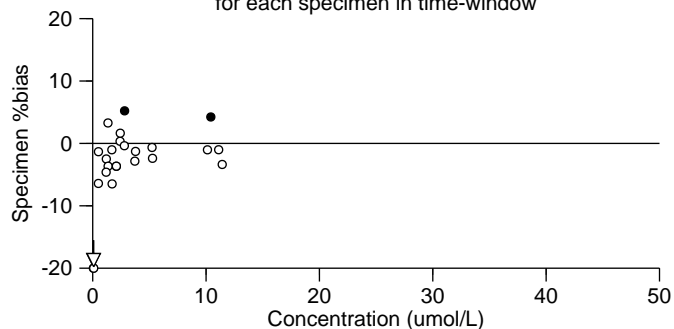


Your result	10.86
Target value (ALTM)	10.42
Uncertainty	0.15
Your bias (%)	+4.2
Your 'Z' score	+0.4 <span style="color: green;">◆</span>
ALTM	10.42
Median	10.20
Your method mean	10.12
Absolute range to	6.67 to 13.47

Your Average 'Z' score = -0.1



Specimen %bias for each specimen in time-window



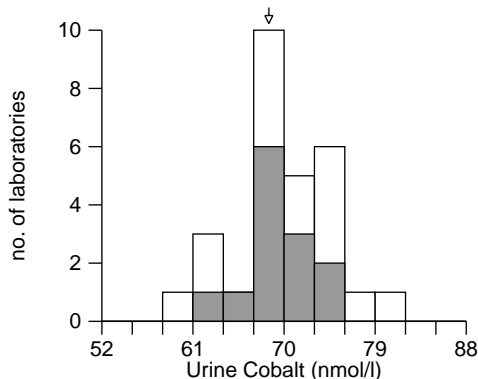
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

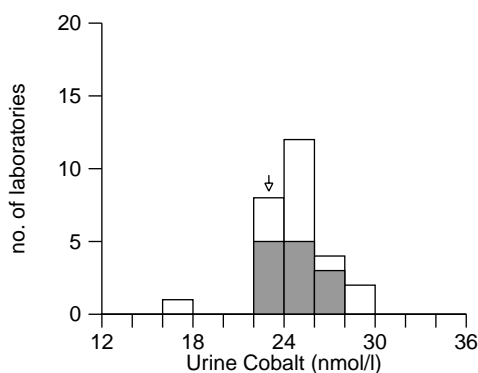
	n	Mean	SD	CV(%)
All methods [ALTM]	28	70.11	4.65	6.6
ICP-MS	6	73.94	4.07	5.5
ICP-MS (Collision/reaction cell mode)	13	69.36	3.29	4.7
Z-ETAAS	2	67.28	11.16	16.6



Your result 67.88  
Target value (ALTM) 70.11  
Uncertainty 1.10  
Your bias (%) -3.2  
Your 'Z' score -0.2 ◆  
ALTM 70.11  
Median 69.75  
Your method mean 69.36  
Absolute range to 59.39 to 79.60

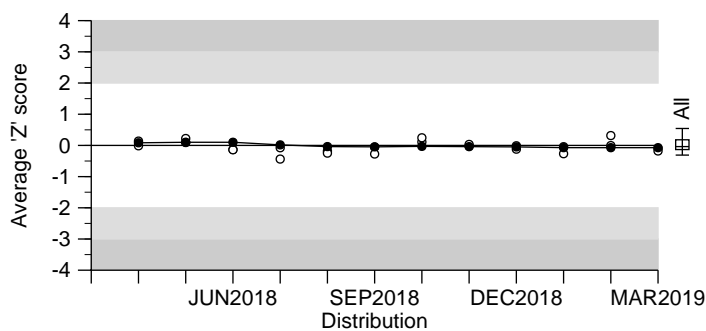
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	28	24.79	2.18	8.8
ICP-MS	6	26.28	2.05	7.8
ICP-MS (Collision/reaction cell mode)	13	24.54	1.38	5.6
Z-ETAAS	2	21.72	5.28	24.3

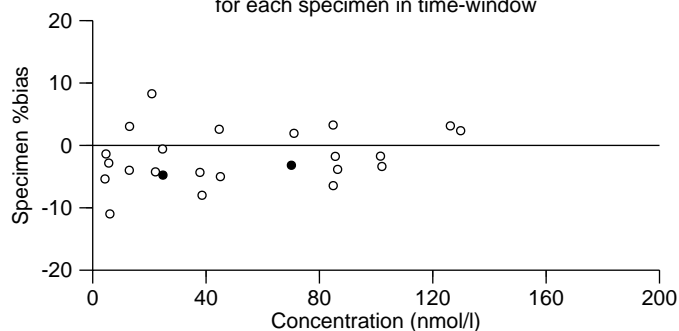


Your result 23.61  
Target value (ALTM) 24.79  
Uncertainty 0.52  
Your bias (%) -4.8  
Your 'Z' score -0.1 ◆  
ALTM 24.79  
Median 24.45  
Your method mean 24.54  
Absolute range to 8.48 to 29.80

Your Average 'Z' score = -0.1



Specimen %bias for each specimen in time-window

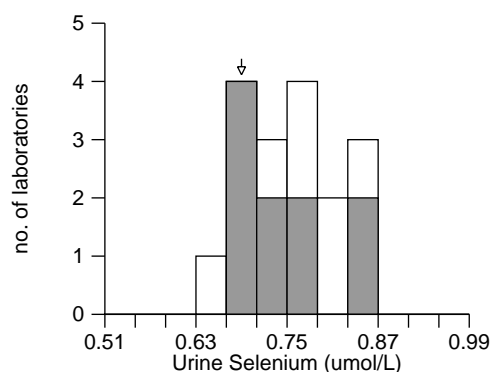


Spec.	Pool	Pool description / Treatments / Additions
2018.23	U1042	Spiked Sample
2018.24	U1046	Spiked Sample

All methods  
 ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

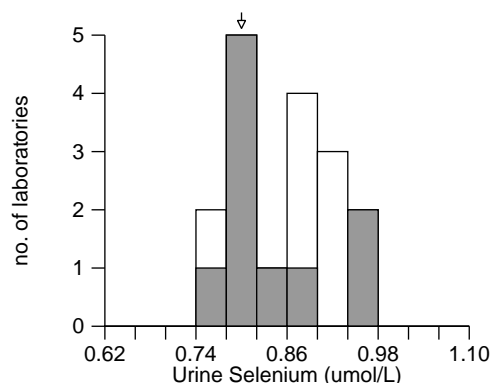
	n	Mean	SD	CV(%)
All methods [ALTM]	17	0.76	0.06	8.2
ICP-MS	1	0.85		
ICP-MS (Collision/reaction cell mode)	10	0.75	0.06	8.5



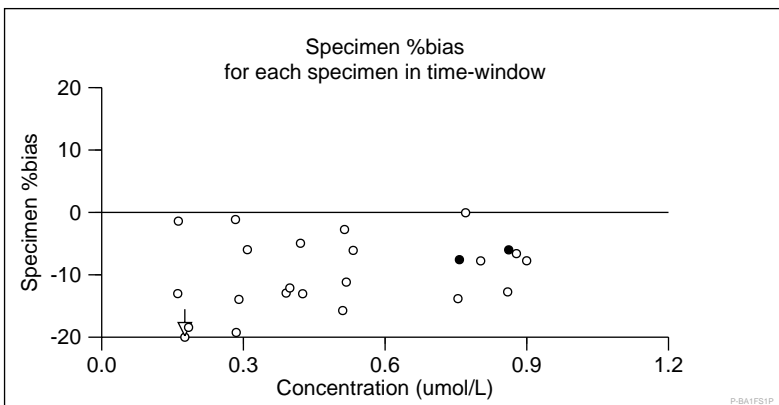
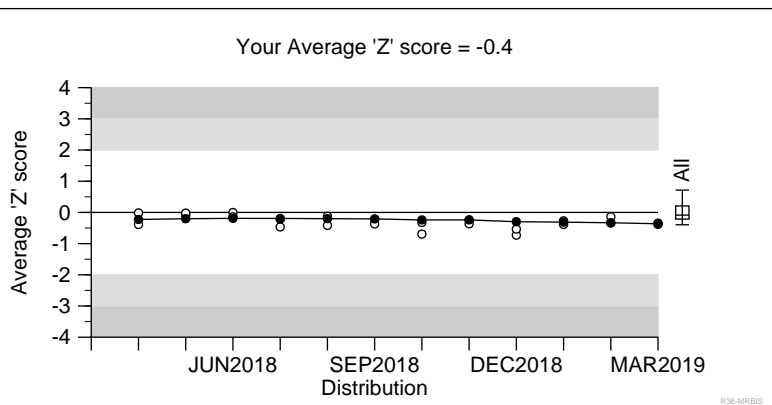
Your result	0.70
Target value (ALTM)	0.76
Uncertainty	0.02
Your bias (%)	-7.6
Your 'Z' score	-0.4 <span style="color: green;">◆</span>
ALTM	0.76
Median	0.76
Your method mean	0.75
Absolute range to	0.66 to 0.86

**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	17	0.86	0.07	7.7
ICP-MS	1	0.89		
ICP-MS (Collision/reaction cell mode)	10	0.85	0.07	8.2



Your result	0.81
Target value (ALTM)	0.86
Uncertainty	0.02
Your bias (%)	-6.0
Your 'Z' score	-0.3 <span style="color: green;">◆</span>
ALTM	0.86
Median	0.87
Your method mean	0.85
Absolute range to	0.75 to 0.97





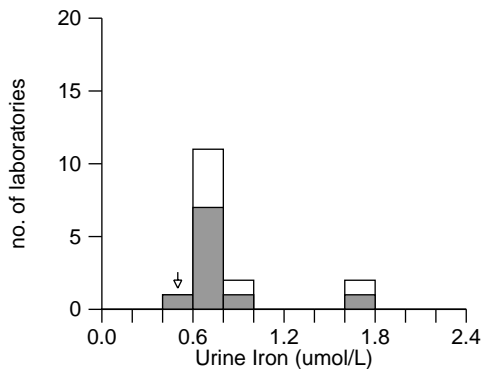
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

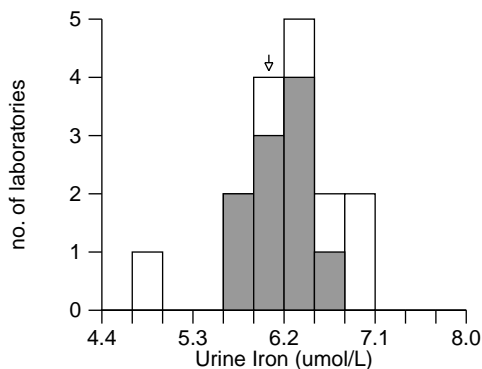
	n	Mean	SD	CV(%)
All methods [ALTM]	16	0.83	0.37	44.5
Flame AAS	1	1.00		
ICP-MS	3	0.99	0.59	59.5
ICP-MS (collision/reaction cell mode)	10	0.79	0.36	45.3



Your result: 0.56  
Target value (ALTM): 0.83  
Uncertainty: 0.11  
Your bias (%): -32.2  
Your 'Z' score: -0.1 ◆  
ALTM: 0.83  
Median: 0.69  
Your method mean: 0.79  
Absolute range to: 0.56 to 1.79

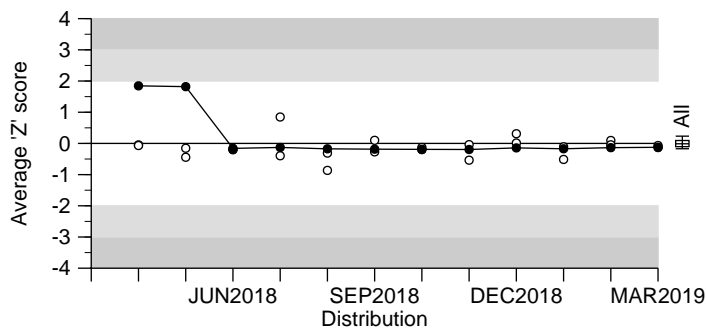
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	16	6.28	0.49	7.9
Flame AAS	1	5.00		
ICP-MS	3	6.69	0.56	8.3
ICP-MS (collision/reaction cell mode)	10	6.22	0.25	4.1

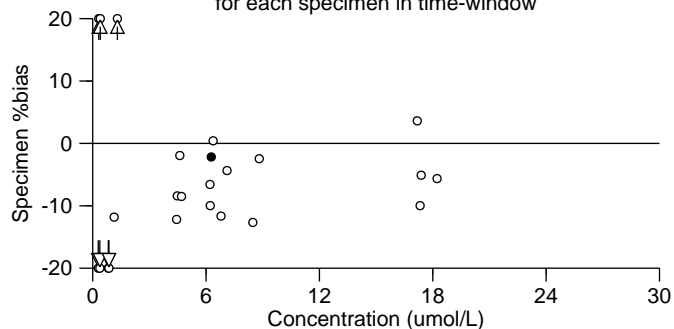


Your result: 6.14  
Target value (ALTM): 6.28  
Uncertainty: 0.15  
Your bias (%): -2.2  
Your 'Z' score: -0.1 ◆  
ALTM: 6.28  
Median: 6.25  
Your method mean: 6.22  
Absolute range to: 5.00 to 7.10

Your Average 'Z' score = -0.1



Specimen %bias for each specimen in time-window



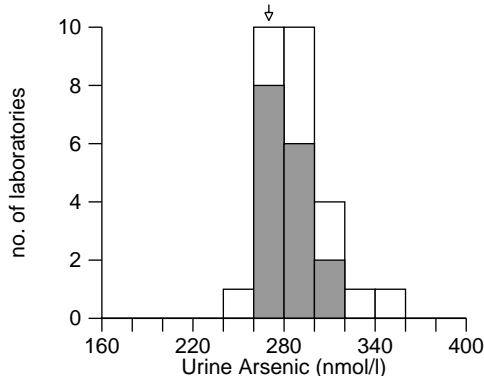
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

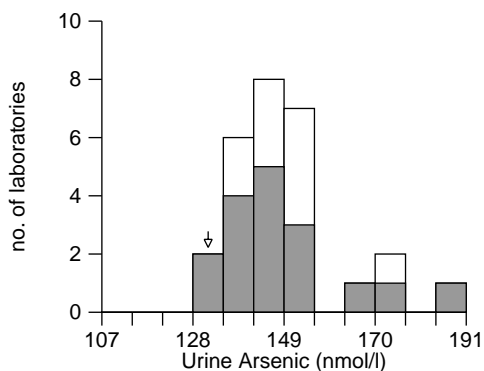
	n	Mean	SD	CV(%)
All methods [ALTM]	28	288.70	22.82	7.9
ICP-MS	3	290.91	33.03	11.4
ICP-MS (Collision/reaction cell mode)	7	283.11	17.14	6.1



Your result 264.17  
Target value (ALTM) 288.70  
Uncertainty 5.49  
Your bias (%) -8.5  
Your 'Z' score -1.4 ◆  
ALTM 288.70  
Median 281.48  
Your method mean 283.11  
Absolute range to 3.07  
353.00

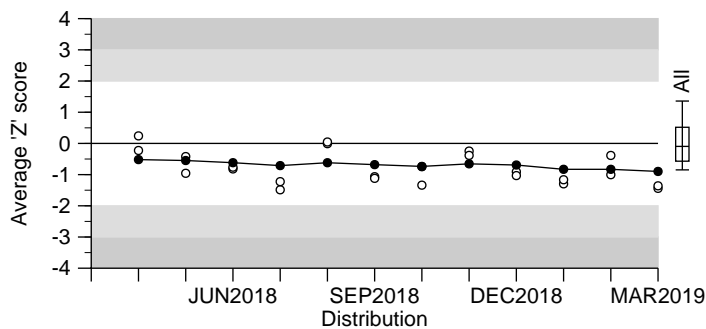
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	28	149.33	13.38	9.0
ICP-MS	3	147.80	5.07	3.4
ICP-MS (Collision/reaction cell mode)	7	148.91	15.47	10.4

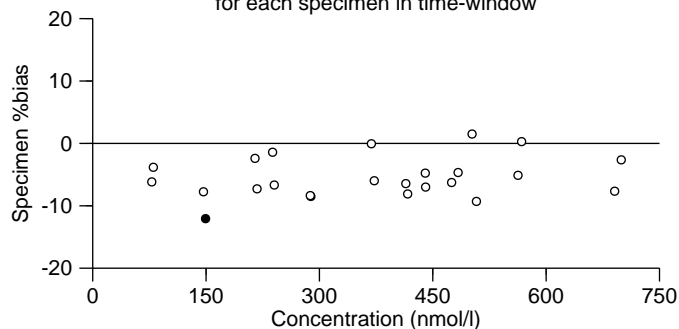


Your result 131.32  
Target value (ALTM) 149.33  
Uncertainty 3.22  
Your bias (%) -12.1  
Your 'Z' score -1.4 ◆  
ALTM 149.33  
Median 147.18  
Your method mean 148.91  
Absolute range to 131.32  
211.00

Your Average 'Z' score = -0.9



Specimen %bias for each specimen in time-window



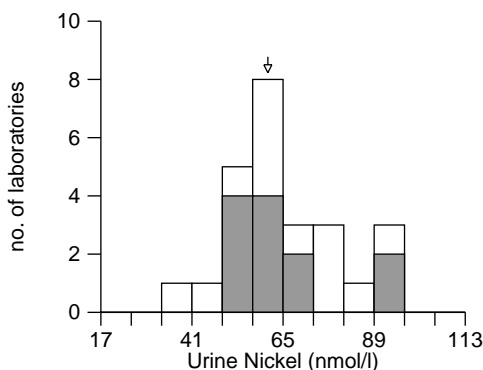
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

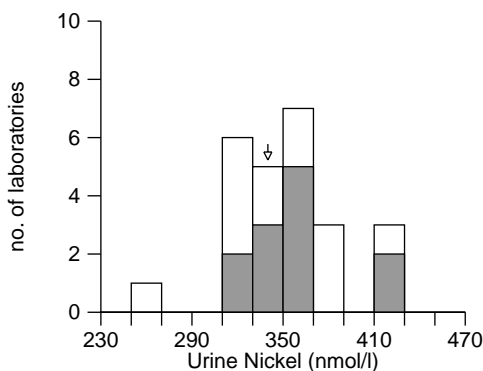
	n	Mean	SD	CV(%)
All methods [ALTM]	25	65.22	14.16	21.7
ICP-MS	4	68.82	10.36	15.1
ICP-MS (Collision/reaction cell mode)	2	65.04	14.29	22.0
Z-ETAAS Zeeman graphite furnace	2	59.90	31.45	52.5



Your result	60.1
Target value (ALTM)	65.22
Uncertainty	3.54
Your bias (%)	-7.8
Your 'Z' score	-0.4
ALTM	65.22
Median	61.00
Your method mean	65.04
Absolute range to	37.66 to 96.57

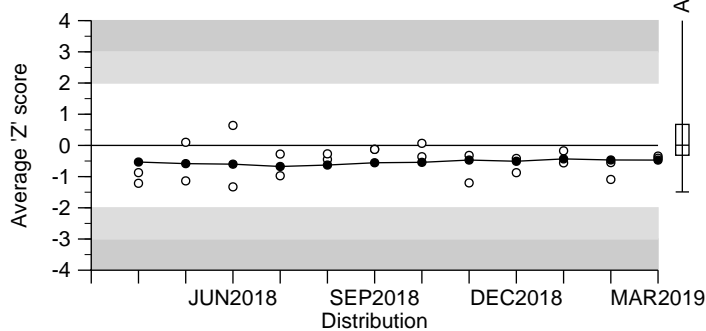
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	25	353.43	35.75	10.1
ICP-MS	4	366.18	50.13	13.7
ICP-MS (Collision/reaction cell mode)	2	359.12	31.13	8.7
Z-ETAAS Zeeman graphite furnace	2	292.47	34.34	11.7

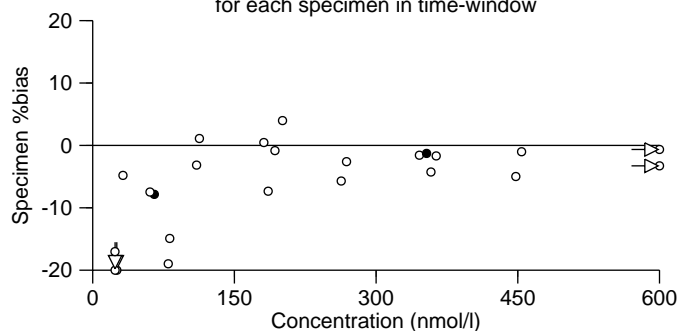


Your result	348.9
Target value (ALTM)	353.43
Uncertainty	8.94
Your bias (%)	-1.3
Your 'Z' score	-0.3
ALTM	353.43
Median	357.81
Your method mean	359.12
Absolute range to	268.19 to 427.67

Your Average 'Z' score = -0.5



Specimen %bias for each specimen in time-window



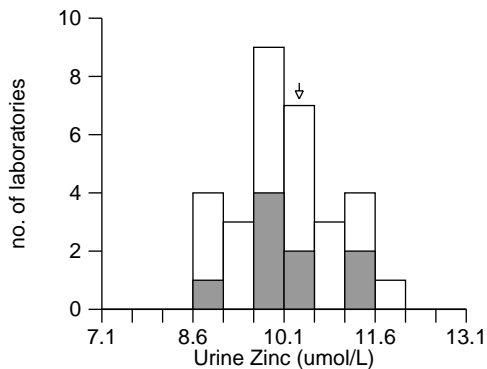
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

All methods  
 ICP-MS  
 ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

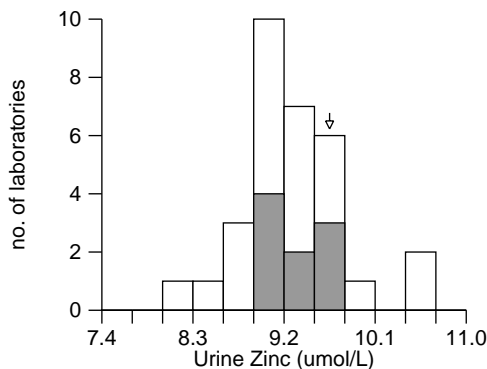
	n	Mean	SD	CV(%)
All methods [ALTM]	32	10.17	0.80	7.9
Flame AAS	3	11.29	2.54	22.5
ICP-MS	13	10.36	0.73	7.0
ICP-MS (collision/reaction cell mode)	9	10.20	0.81	7.9



Your result: 10.29  
 Target value (ALTM): 10.17  
 Uncertainty: 0.18  
 Your bias (%): +1.2  
 Your 'Z' score: +0.1 ◆  
 ALTM: 10.17  
 Median: 10.15  
 Your method mean: 10.20  
 Absolute range to: 8.90 to 14.08

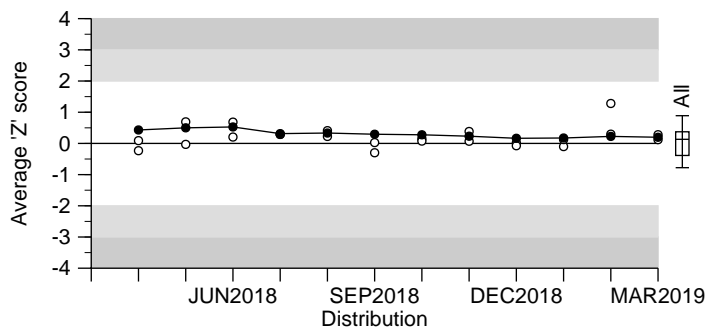
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	32	9.28	0.52	5.6
Flame AAS	3	10.43	2.30	22.0
ICP-MS	13	9.31	0.54	5.8
ICP-MS (collision/reaction cell mode)	9	9.32	0.33	3.5

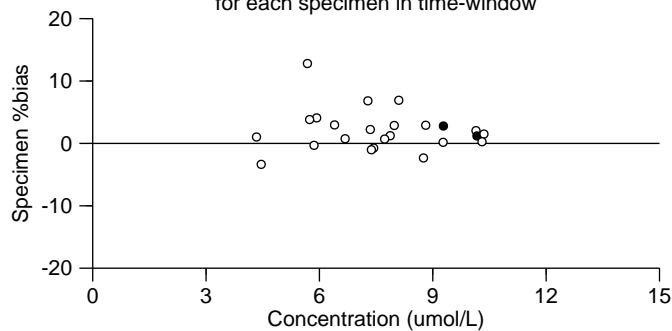


Your result: 9.54  
 Target value (ALTM): 9.28  
 Uncertainty: 0.12  
 Your bias (%): +2.8  
 Your 'Z' score: +0.3 ◆  
 ALTM: 9.28  
 Median: 9.31  
 Your method mean: 9.32  
 Absolute range to: 8.10 to 13.04

Your Average 'Z' score = +0.2



Specimen %bias for each specimen in time-window



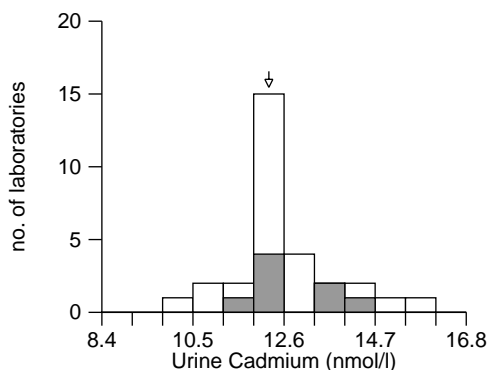
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

All methods  
 ICP-MS  
 ICP-MS (collision/reaction cell mode)

**Specimen : 2018.23**

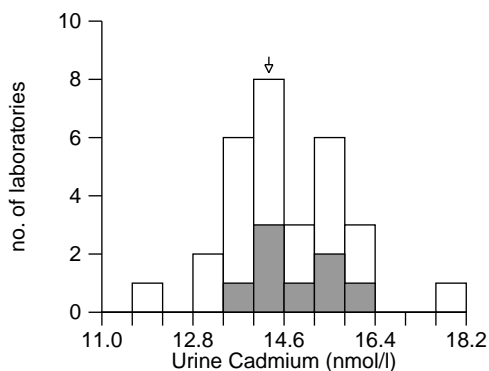
	n	Mean	SD	CV(%)
All methods [ALTM]	31	12.65	1.25	9.9
ICP-MS	11	12.88	1.05	8.1
ICP-MS (collision/reaction cell mode)	8	12.91	1.11	8.6
Z-ETAAS	3	14.23	4.83	33.9



Your result	12.39
Target value (ALTM)	12.65
Uncertainty	0.29
Your bias (%)	-2.0
Your 'Z' score	-0.2 <span style="color: green;">◆</span>
ALTM	12.65
Median	12.40
Your method mean	12.91
Absolute range to	10.00 to 19.75

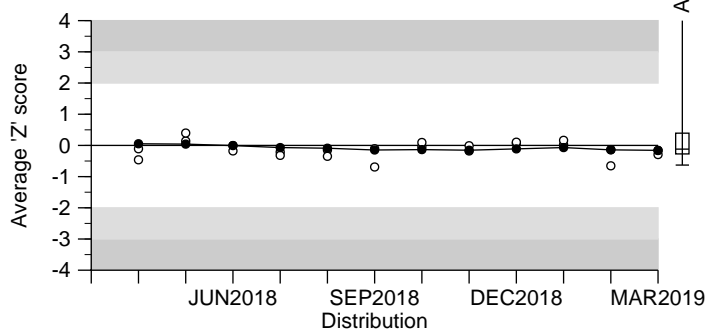
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	31	14.68	1.13	7.7
ICP-MS	11	15.02	1.16	7.7
ICP-MS (collision/reaction cell mode)	8	14.88	0.72	4.8
Z-ETAAS	3	17.08	5.11	29.9

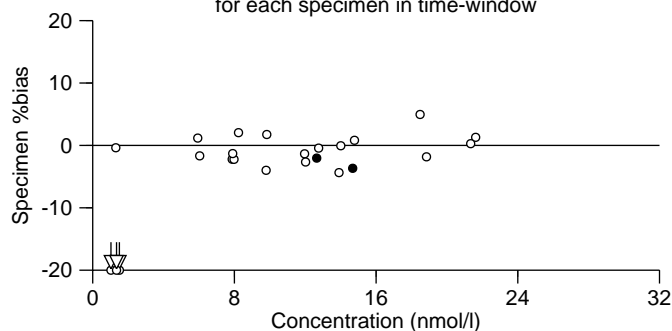


Your result	14.14
Target value (ALTM)	14.68
Uncertainty	0.26
Your bias (%)	-3.7
Your 'Z' score	-0.3 <span style="color: green;">◆</span>
ALTM	14.68
Median	14.50
Your method mean	14.88
Absolute range to	12.00 to 22.86

Your Average 'Z' score = -0.2



Specimen %bias for each specimen in time-window



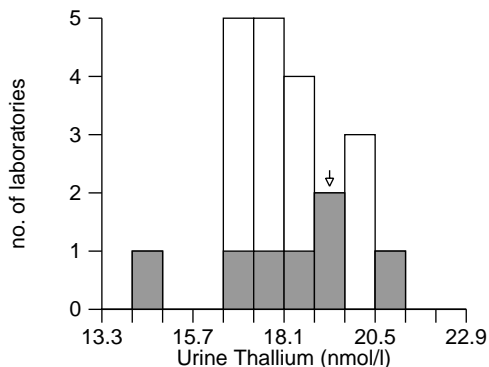
Spec. Pool Pool description / Treatments / Additions

2018.23 U1042 Spiked Sample  
2018.24 U1046 Spiked Sample

□ All methods  
■ ICP-MS (Collision/reaction cell mode)

**Specimen : 2018.23**

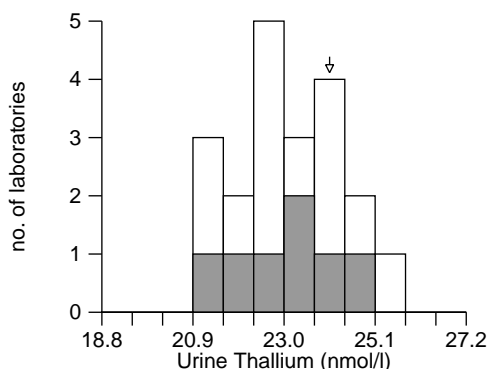
	n	Mean	SD	CV(%)
All methods [ALTM]	21	18.15	1.53	8.5
ICP-MS	9	18.21	1.25	6.9
ICP-MS (Collision/reaction cell mode)	7	18.14	2.21	12.2



Your result	19.41
Target value (ALTM)	18.15
Uncertainty	0.42
Your bias (%)	+6.9
Your 'Z' score	+1.0
ALTM	18.15
Median	18.10
Your method mean	18.14
Absolute range to	14.40 to 21.28

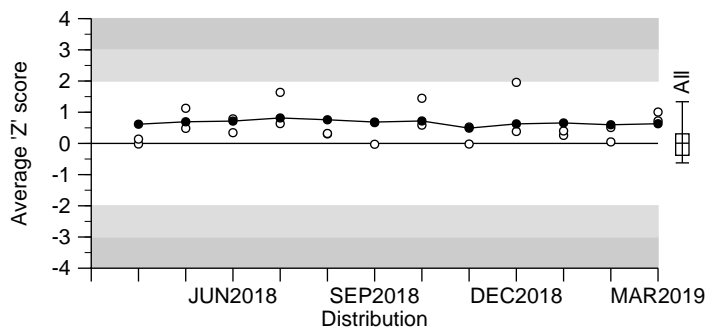
**Specimen : 2018.24**

	n	Mean	SD	CV(%)
All methods [ALTM]	21	23.10	1.23	5.3
ICP-MS	9	23.87	2.24	9.4
ICP-MS (Collision/reaction cell mode)	7	23.04	1.02	4.4



Your result	24.00
Target value (ALTM)	23.10
Uncertainty	0.35
Your bias (%)	+3.9
Your 'Z' score	+0.7
ALTM	23.10
Median	23.10
Your method mean	23.04
Absolute range to	21.00 to 29.00

Your Average 'Z' score = +0.6



Specimen %bias for each specimen in time-window

